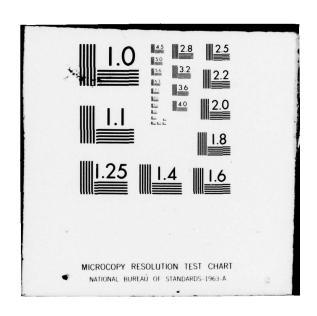
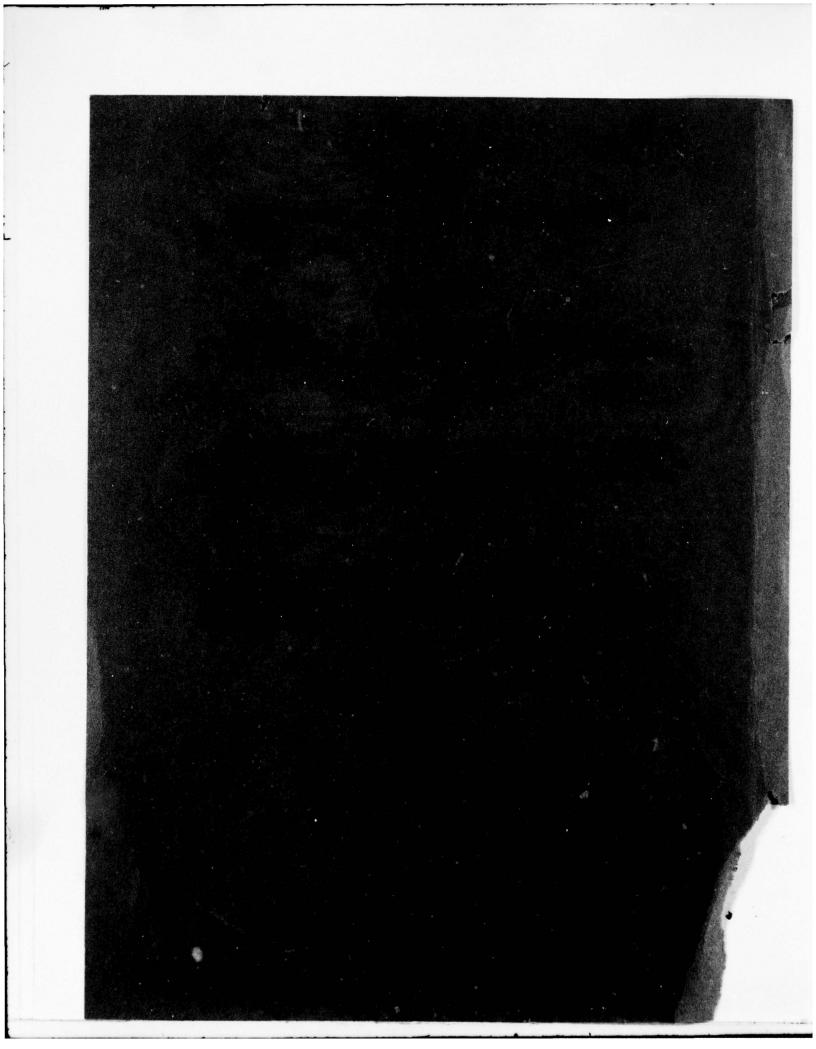
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acquisition systems, counterbattery fire capability, and electronic warfare capability. These factors are taken into account by AFSM as it calculates the damage that a BLUE artillery force could do to a given RED threat force which is

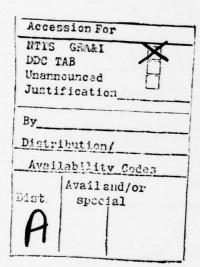
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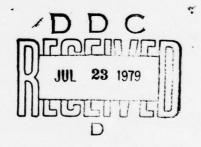
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The User Manual contains:

- An overview of the AFSM computer program including a conceptual flow-chart and brief explanation of the model.
 - (a) A detailed description of the input required to execute the program.
 - (3) A description of the output.
 - (4) A sample problem with fictitious inputs and the resulting output.
 - (5.) A glossary defining the important variables in AFSM.





ACKNOWLEDGMENT

The Artillery Force Simulation Model (AFSM) was developed in 1974-1975 to enhance the US Army Materiel Systems Analysis Activity's (AMSAA) capability to evaluate the performance of artillery force mix alternatives against RED threat scenarios produced by Army war gaming models.

The AFSM model has gone through many changes since its original version became operational. The version documented here is current as of May 1978. Documentation, if any, of AFSM changes made after May 1978 will be published separately.

The original AFSM model was given by AMSAA to FT Sill and to TRASANA. Each of those groups has made its own extensive changes to AFSM and now maintains a separate variant of AFSM. In addition, ARRADCOM at Dover, NJ has been given a copy of a more recent version of the AFSM model. Because of the number of different versions of AFSM in existence at these agencies, it is important to state that this manual applies in full only to AMSAA's AFSM program.

The original version of AFSM was developed in 1974-1975 for the US Army Ballistic Research Laboratory's BRLESC I and II computers by the following AMSAA personnel: Mr. E. Stauch, Mr. E. Morrow, Mr. B. King, and Mr. J. Blomquist.

The AFSM model has undergone a number of changes since the original version. The major changes made by AMSAA personnel are listed below:

- a. An attrition routine to approximate the losses of BLUE artillery tubes to RED counterbattery fire was developed by Mr. C. Thomas and Mr. N. Winslow.
- b. A CLGP (COPPERHEAD) submodel to allow the use of cannon launched guided projectiles was added by Mr. E. Stauch and Mr. J. Blomquist.
- c. A revised and expanded attrition routine to play RED counterbattery fire in greater detail was developed by Mr. R. Sandmeyer.
- d. A counterbattery suppression model was added by Mr. R. Sandmeyer.
- e. A modification to allow variable size battalions having more than one weapon system was made by Mr. R. Chandler.
- f. An improved munition effectiveness model including posture sequencing was added by Mr. R. Sandmeyer.
- g. A GSRS (General Support Rocket System) submodel was developed by Mr. R. Chandler.

ACKNOWLEDGMENT (cont)

h. An improved massing routine was developed by Mr. E. Stauch.

In addition, Mr. R. Chandler deserves credit for modifying the AFSM program for use on the UNIVAC 1108 computer. Mr. R. Sandmeyer and Ms. D. Frederick modified the program for use on the CDC 7600 computer.

Armament Systems, Inc. personnel responsible for documentation of the program were John P. Virbila and James A. Buckner. Review of the program documentation progress as well as assistance in understanding the program coding were provided by Richard Sandmeyer of AMSAA. The documentation also relied heavily on a partial variable glossary prepared by Mr. R. Chandler and on an input definition list from an earlier version of AFSM prepared by Mr. E. Stauch and typed by Ms. C. Roberts.

Publication was carried out under the auspices of the US Army Materiel Systems Analysis Activity and administered through the Naval Weapons Center, China Lake, California by Mr. H. W. Drake, Code 318, under Contract NO0123-76-C-0960.

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ARTILLERY FORCE SIMULATION MODEL USER MANUAL

SECTION 1 INTRODUCTION

BACKGROUND

The Artillery Force Simulation Model (AFSM) is an off-shoot of earlier artillery simulation models. The earliest ancestor, called "LEGAL MIX", was prepared at AMSAA using the FORAST language for the Ballistic Research Laboratory (BRL) BRLESC I computer. Later versions of LEGAL MIX, as well as AFSM have been written in the FORTRAN programming language for CDC 7600 and UNIVAC 1108, as well as the now deceased BRLESC I and II computers.

PROBLEM INTRODUCTION

There are two sets of inputs required in order to execute AFSM. These inputs consist of target information (on magnetic tape) and user-prepared parameters for the battle scenario (on cards). The target array input tape for AFSM is an output product of either the "DIVWAG" or "DIVLEV" wargames. Section 3 of this manual defines these two inputs in detail. In defining the target inputs to AFSM, the player is allowed to structure Red units with personnel, tanks, armored personnel carriers, trucks, artillery tubes, radars, and/or missile or rocket launchers. Terrain features which can be accommodated are open areas, wooded areas, towns, and grassy environments.

A scale of military worth values for the various type tactical elements on the target list is used for establishing a priority list for target attack and for segmenting targets into categories which will control the level of attack and ammunition expenditure against a target. A measure of BLUE force performance is achieved by totaling the military worth values for damaged targets.

METHODOLOGY

The simulated artillery battle is fought by selecting RED targets for fire according to their time of acquisition in the battle area and their priority. Fire missions can be initiated by calls from forward observers to the direct support battalion Fire Direction Center (FDC) or by calls from other target sensors to Group or Division/Artillery (D/A) level FDCs. Figure 1-1 is a sample artillery fire support organization which shows the relationships of the various different echelon FDCs and the order in which they communicate in response to a fire mission .

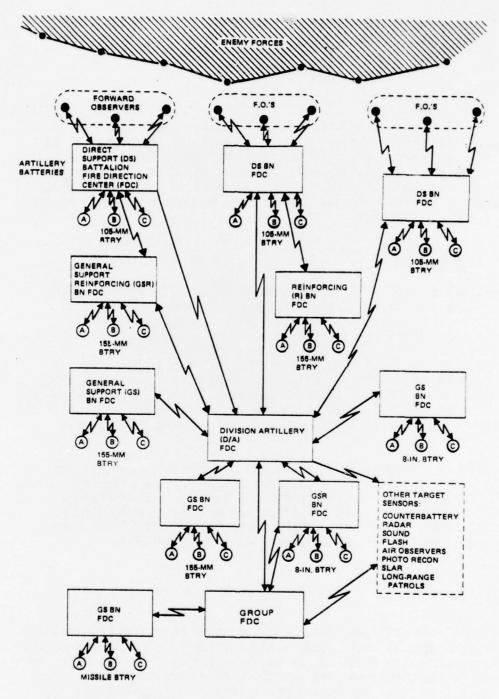


FIGURE 1-1. Artillery Fire Support Sample Organization.

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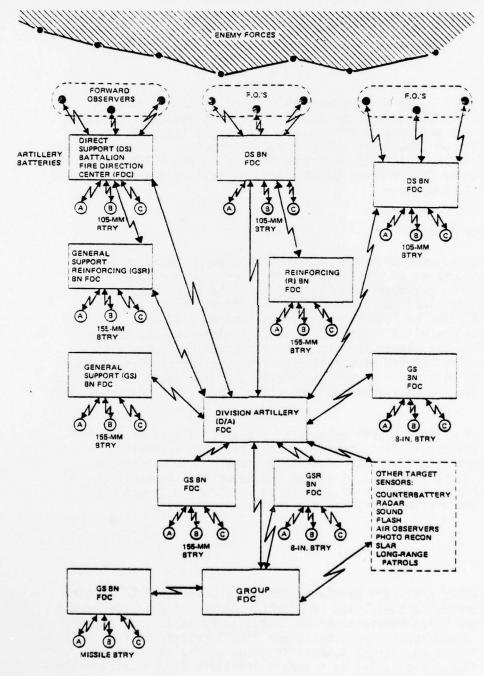


FIGURE 1-1. Artillery Fire Support Sample Organization.

The Direct Support Battalion (DS BN) FDC is normally located closest to the forward edge of the battle area (FEBA). A DS BN may be organized as a stand alone unit, in which case requests for additional fire (RFAF) will go directly to the D/A echelon FDC, or the DS BN may have a reinforcing battalion (R BN) FDC assigned. The DS BN with an R BN assigned willissue an RFAF first to the R BN, then to the D/A FDC if the R BN cannot respond. Another type of organizational assignment is the General Support Reinforcing Battalion (GSR BN). The GSR BN will respond to RFAFs from either the DS BN FDC or the D/A FDC when assigned at that echelon. Similarly, GS BN FDCs and GSR BN FDCs can be placed in the organization at the D/A and/or the Group level and will respond to RFAFs issued by their controlling FDCs. Other target sensors, such as counterbattery radar, sound, flash, air observers, photo reconnaissance, side-looking airborne radar, or long-range patrols, initiate fire mission calls directly to the Division/Artillery or Group level FDCs.

Figure 1-2 depicts a simplified logic diagram for the model. Each fire mission, as it advances to the top of the fire mission queue, is examined by the program, and the program in turn examines the resources of the appropriate FDC to see whether or not batteries assigned to that FDC can engage the target. If so, battery fire occurs, target damage is assessed, and the probability that the BLUE battery has been acquired by the RED forces is calculated. If the FDC resources are not sufficient or available to fire the mission, the program will generate a BLUE fire mission request for additional fire (RFAF) which is added to the fire mission queue in the appropriate place according to time and target priority. If, after firing, the ${\sf BLUE}$ battery was acquired by the ${\sf RED}$ forces, the program will schedule RED counterbattery fire which is added to the fire mission queue in the appropriate place Table 1-1 shows the request for fire sequence according to time. used by AFSM to examine battery resources within each battalion in order to satisfy requests for fire. If the mission originated at a higher echelon (D/A or Group), then that echelon's resources (i.e., assigned battalions) would be examined before any RFAF's would be sent to DS level.

If the BLUE battery was not acquired, the game clock will advance and the next fire mission from the queue will be processed. When the next fire mission arriving at the top of the queue is a RED fire mission, the RED batteries will fire the scheduled number of rounds for the mission, and an assessment is then made of damage to the BLUE battery. The program will then return to the queue to process the next fire mission. During each return to the fire mission queue, the program checks the gameclock. If the clock has advanced 1 hour since the last printout of the simulation, another printout will occur. If the gameclock exceeds maximum gametime (TMAX), a final printout will be made and the run will terminate. The program also makes a 1/4 hourly time check for the performance of repair and maintenance (RAM). When it is time for the 1/4 hourly RAM check, the program will remove gun tubes

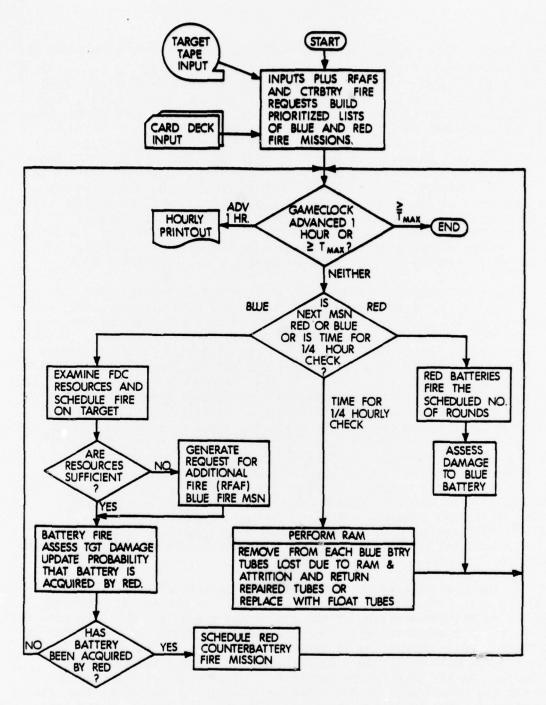


Figure 1-2. Artillery Force Simulation Model (AFSM) General Logic Flow.

TABLE 1-1. FDC Fire Ordering Sequence

Request for fire orig. by:	FDC receiving request for fire	Fire ordering sequence - (AFSM examines battalion Battery resources in the following sequence until resources are found).			
Forward Observer (FO)	Direct Support Battalion (Assigned to FO)	DS BN, DS-R BN, DS-GSR BN, DIV-GS BN, DIV/GROUP-GSR BN, any DS-GSR BN not checked, other DS and DS R BNs, GROUP-GS BN.			
Other target	Division/ Artillery	DIV-GS BN, DIV/GROUP-GSR BN, DIV/DS-GSR BN, DS BN, DS-R BN, GROUP-GS BN.			
sensors	GROUP (Corps Level)	GROUP-GS BN, DIV/GROUP-GSR BN, DIV-GS BN, DIV/DS-GSR BN, DS BN, DS-R BN.			
Definitions - BN = Battalion DS = Direct Support R = Reinforcing GSR = General Support Reinforcing GS = General Support					

lost due to attrition or RAM from each BLUE battery and will return repaired tubes or make replacements with float tubes if available. After each RAM action is accomplished, the program again returns to the fire mission queue to process the next fire mission.

The artillery force is changed by the user varying the number and types of BLUE force FDCs (up to 13), the number of different weapons systems in use (up to 20), the different round types available for fire (up to 25), and the round I.D.s used per environment/posture combination (up to 10). Also, the BLUE force boundaries (x- and y- coordinates) are defined by the user. The FEBA is allowed to move up to 10 times during the battle when the user specifies the movement coordinates and the time of movement in the input card deck. Battery priority values are entered and the organization of the BLUE force scenario is defined in input card types 59 through 64 (refer to Section 3 for a detailed explanation of input card types). The user can also specify up to 13 Blue force equipment failures for RAM purposes when he constructs the input card deck battle scenario.

The final definition of the artillery force is accomplished when the user describes the RED artillery force. Up to eight RED battalion weapon systems can be specified and an unlimited number of RED battalions can be defined in each input card deck. These card parameters control the information which is read from the magnetic tape of target information provided from the previously run war game model "DIVWAG" or "DIVLEV".

SECTION 2

CONCEPTUAL FLOWCHART

This section is intended for and oriented towards the reader who is concerned with the basic content, logic, and computational flow of the AFSM program. It is not intended to explain or to delineate all of the machinations of program coding, subroutine interaction, or rationale in specific terms.

The conceptual flowchart for the AFSM program, including narrative steps, is presented in the pages that follow. The narrative steps explaining the flowchart are indicated on the flowchart by the numbers enclosed in hexagons. In addition, all input connectors, whether on-page or off-page types, are numerically ordered in a monotonically increasing fashion from the start to the end of the flowchart.

STEP 1:

Specify variables in COMMON. Enter data for the mix being played via calls to the six subroutines that are required for reading punched cards.

STEP 2:

Read target/mission data from Logical Unit No. 3 up to the next game arrival time. Store data in the PREQ array. Set GAMCLK to the arrival time of next set of data. Transfer target/mission data from the PREQ to the QUE array, dropping any target/missions that have been defeated. Order the QUE array by priorities as follows:

- Targets by Military Worth
 Meteorological missions
- 3. Survey and Artillery Target Intelligence missions
- 4. Fire plans

STEP 3:

If there are no Red counterbattery fire missions scheduled to occur before the next Blue (QUE) mission, continue with Step 4. Otherwise, execute the Red counterbattery fire mission scheduled for this time on the KYUSKY array. Each Red battery scheduled to fire on this mission fires as many of its scheduled rounds as its current status, considering suppression (if played), defeat status, and tube losses, permits.

If the target Blue battery has moved since the fire was scheduled, the counterbattery fire mission has no effect. Otherwise, assess and record the damage done to the Blue battery by this Red counterbattery fire mission. Remove this Red fire mission from the KYUSKY array. Return to beginning of this step to check if more Red counterbattery fire missions are scheduled to occur before the next Blue (QUE) mission.

STEP 4:

Check the current target mission, ordered by priority, in the QUE array. Determine if the FDC, to which the mission is assigned, has sufficient time to process the mission. If insufficient time is available for processing, drop the mission from the QUE array and transfer to Step 28. Otherwise, check to see if this is a fire mission. If it is, transfer to Step 8. If it is not a fire mission, continue with Step 5.

STEP 5:

Add this mission to the WORK array for this FDC and delete the mission from the QUE array. If it is too late to consider processing this mission, increment the unaccomplished mission counter, drop the mission from the QUE array, and transfer to Step 28. Otherwise, continue with Step 6.

STEP 6:

If there is no time left at this FDC, transfer to Step 28. Otherwise, charge the time used for processing to the FDC clock. If processing of the mission has not been completed, transfer to Step 28. If processing has been completed, continue with Step 7.

STEP 7:

If this is a fire plan mission and it has not been assigned to a battalion level FDC, generate fire plan messages from Division or Group to the appropriate battalions. Store these messages in the PREQ array. Regardless of the mission type, remove the mission from the WORK array for this FDC and increment the accomplished mission counter. Transfer to Step 28.

STEP 8:

This step is executed when a fire mission is to be processed. If the mission has not been assigned to a battalion FDC, transfer to Step 24. Otherwise, order the batteries in the battalion based on the following criteria:

- Battery priority (if used)
- 2. Is battery in position?
- 3. Is battery within range of target?
- 4. Busy status of battery
- 5. Availability of ammunition
- 6. Does battery have the minimum number of tubes up and in operating condition?
- 7. Is battery undefeated (if defeat of batteries due to personnel losses is played)?
- 8. Is battery unsuppressed (if suppression is played)?

If this is not a potential CLGP mission transfer to Step 17. Otherwise continue with Step 9.

STEP 9:

Check the current battery's availability based upon the following:

- 1. Is battery within range of target?
- 2. Is battery currently free from other fire missions (busy status)?
- 3. Does battery have CLGP rounds available?
- 4. Does battery have sufficient number of tubes available?
- 5. Can battery fire CLGP rounds at the present time?

If the answers to all of the above are affirmative, transfer to Step 12. If all batteries in the battalion have been checked, continue with Step 10. Otherwise, return to the start of this step and check the next battery in the battalion.

STEP 10:

If the battalion just checked and found unable to fire CLGP has a reinforcing or GSR battalion assigned to it, then make that reinforcing or GRS battalion the one to be considered for this CLGP mission, and return to Connector ten in Step 8. Otherwise, continue with Step 11.

STEP 11:

Charge time spent to battalion FDC. Reset Military Worth value for this target to its regular value and determine if there is sufficient time for regular cannon fire. If there is not sufficient time, change the mission to an ATI report and transfer to Step 28. Otherwise, change the mission to a regular FO fire mission at the DS battalion to which the CLGP mission was originally reported and return to Connector ten in Step 8.

STEP 12:

If the FO does not have sufficient view time to fire one or more CLGP rounds, return to Step 11. Otherwise, determine the number of CLGP rounds to be fired based upon the number of rounds available and the FO view time. Determine the effects of the CLGP rounds against tanks, APCs and trucks. Continue with Step 13.

STEP 13:

If this fire mission is the first one by the current firing battery from this site, begin the Red force's probability of detecting and acquiring the firing Blue battery and continue at Step 14. If it is not the first fire mission from this site and the battery at the site has been acquired within the Red force's "target memory" time, transfer to Step 15. Otherwise continue with Step 14.

STEP 14:

Initialize or update, as appropriate, the Red force's probability of detecting and then acquiring the firing Blue battery. If the probability of acquisition exceeds 0.5, continue with Step 15. Otherwise transfer to Step 16.

STEP 15:

Schedule Red CB fire against the acquired Blue battery. Order the Red battalions by weapon type, range, and echelon. Mass enough batteries to fire the number of rounds required by the Red CB doctrine, or by firing as many rounds as possible if the CB doctrine cannot be met. In massing the Red batteries, consider the following:

- 1. Suppression status (if played)
- 2. Defeat status
- 3. Number of tubes up in Red battery

- 4. Number of rounds left in AMMO supply
- Range to target
 Time available
- 7. Movement status

Enter record of batteries massed, number of rounds each battery is to fire, and time at which they are to be fired on KYUSKY array for later execution in proper time sequence. Continue with Step 16.

STEP 16:

Remove mission from the QUE array. Charge the battalion FDC for processing time. Transfer to Step 28.

STEP 17:

Order the rounds for this battery considering only those rounds allowed against the target's estimated posture and environment. Determine the weighted lethal area for each round type based either on weight or cost per round. Sort the HE and ICM rounds in order of weighted lethal areas. Determine round availability based on the following:

- 1. Basic load and resupply rate
- 2. Constraint on number of volleys
- 3. Rate of fire
- 4. Use of rounds saved for fire plans if MW of target is greater than that of fire plan target

Determine the number of rounds allowed to be fired by first battery for best available round type. Apply the effects cutoff value as volleys are fired in trying to attain desired attack level. Assess damage to target and increment counters for rounds fired by battery, time used by battery, and missions fired by battery. Continue with Step 18.

STEP 18:

If this fire mission is the first one by the current firing battery from this site, begin the Red force's probability of detecting and acquiring the firing Blue battery and continue at Step 19. If it is not the first fire mission from this site and the battery at the site has been acquired within the Red force's "target memory" time, transfer to Step 20. Otherwise continue with Step 19.

STEP 19:

Initialize or update, as appropriate the Red force's probability of detecting and then acquiring the firing Blue battery. If the probability of acquisition exceeds 0.5, continue with Step 20. Otherwise transfer to Step 21.

STEP 20:

Schedule Red CB fire against the acquired Blue battery. Order the Red battalions by weapon type, range, and echelon. Mass enough batteries to fire the number of rounds required by the Red CB doctrine, or by firing as many rounds as possible if the CB doctrine cannot be met. In massing the Red batteries, consider the following:

- 1. Suppression status (if played)
- 2. Defeat status
- 3. Number of tubes up in Red battery
- 4. Number of rounds left in AMMO supply
- 5. Range to target
- 6. Time available
- 7. Movement status

Enter record of batteries massed, number of rounds each battery is to fire, and time at which they are to be fired on KYUSKY array for later execution in proper time sequence. Continue with Step 21.

STEP 21:

If the desired attack level has been reached, transfer to Step 23. Otherwise, return to Step 17 for additional batteries of the battalion, if needed, to attain the desired attack level. If, after all batteries in the battalion have been checked, and the desired attack level has not been achieved, check to see if the battalion has a reinforcing or GSR battalion assigned to it. If not, continue with Step 22. Otherwise consider the reinforcing or GSR battalion and return to Connector ten of Step 8.

STEP 22:

If the mission came from Division or Group, continue with Step 23. Otherwise, generate a RFAF to a higher echelon FDC, add the RFAF mission to the PREQ array and reset the game clock. Continue with Step 23.

STEP 23:

If any rounds have been fired by this battalion, remove the fire mission from the QUE array. Charge appropriate times to the battalion FDC and battery clocks. Transfer to Step 28.

STEP 24:

This step is executed whenever a Division or Group FDC fire mission has been specified. If the fire mission has been assigned to Group FDC, the battalions assigned to Group are ordered as follows:

1. General support battalions at Group level

2. General support reinforcing battalions from Group

3. Missile battalions

When the fire mission has been assigned to Division FDC, the battalions are ordered as follows:

1. General support battalions at Division

2. General support reinforcing battalions from Group

General support reinforcing battalions at Division

4. Direct support and reinforcing battalions

In either case, program execution continues with Step 25.

STEP 25:

Check the capability of each battery of the assigned battalion to contribute to this fire mission based upon the following criteria:

1. Is battery in firing position?

Is battery within range of target?

3. Is proper ammunition available at the battery?

4. What is the "busy" status of the battery?

- 5. Does the battery have the minimum number of tubes up and available for the mission?
- 6. Is battery undefeated?
- 7. Is battery unsuppressed?

If the answer to any of the above criteria is negative, transfer to Step 26. Otherwise, generate a message to the assigned battalion FDC stating required effects. Move GAMCLK back if required to do so. If the required attack level has not been reached and the battalion massing limit has not been reached, transfer to Step 26. Otherwise, charge the appropriate time to the assigned battalion FDC, delete the mission from the QUE array, and transfer to Step 28.

STEP 26:

If all assigned battalions have not been processed, return to Step 25. If all battalions have been processed and this fire mission has not been assigned to Group, transfer to Step 27. If the fire mission was not sent up to Group by Division, generate a RFAF to Division and remove fire mission from the QUE array. If the fire mission was sent up to Group from Division and battalion fire missions were generated, remove this current fire mission from the QUE array. In either case, charge the appropriate time to Group FDC and transfer to Step 28.

STEP 27:

If this fire mission was sent down to Division from Group and there were battalion level fire missions generated, or if a RFAF message was sent to Group, delete this fire mission from the QUE array. Charge the appropriate time to Division FDC and continue with Step 28.

STEP 28:

If all target/missions in the QUE array have been processed, continue with Step 29. Otherwise, return to Step 3 to process next target/mission on the priority list.

STEP 29:

Use any remaining time up to GAMCLK to complete processing of missions stored in the WORK array for each friendly FDC in the game. Move all FDC and battery clocks up, if necessary, and charge time increments to idle times as required. If 15 minutes or more have transpired since the last RAM check, continue with Step 30; otherwise, transfer to Step 33.

STEP 30:

Determine number of weapons to be returned to this battery of the Blue force at this time. Check for attrition failures and, if there are none, transfer to Step 31. Otherwise, store the short-term and long-term failures in the TUBIN array. If a permanent failure has been inflicted, float a weapon to this battery, if one is available. Continue with Step 31.

STEP 31:

Update the status of EFC rounds and distance traveled by battery at this time. Determine firepower mobility, and tube change status of battery. Continue with Step 32.

STEP 32:

If this battery requires a tube change or has suffered a reliability failure, store short-term, long-term, and tube change failures in the appropriate slots of the TUBIN array. Assign a float weapon to this battery if a permanent failure has been incurred and a float weapon is available. Update the tubes available status for this battery. If more batteries remain to be processed, return to Step 30; otherwise, continue with Step 33.

STEP 33:

If the game clock (GAMCLK) has advanced I hour, print the cumulative results of the game at this time. If the maximum game time has not been met or exceeded, return to Step 2 to enter additional target/mission data from Logical Unit No. 3. Otherwise, halt execution of the AFSM program because simulation of the game has been completed.

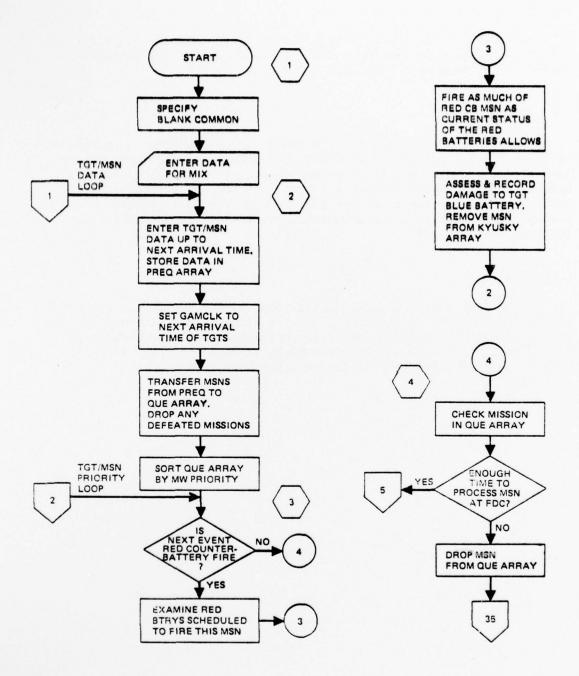


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 1 of 10)

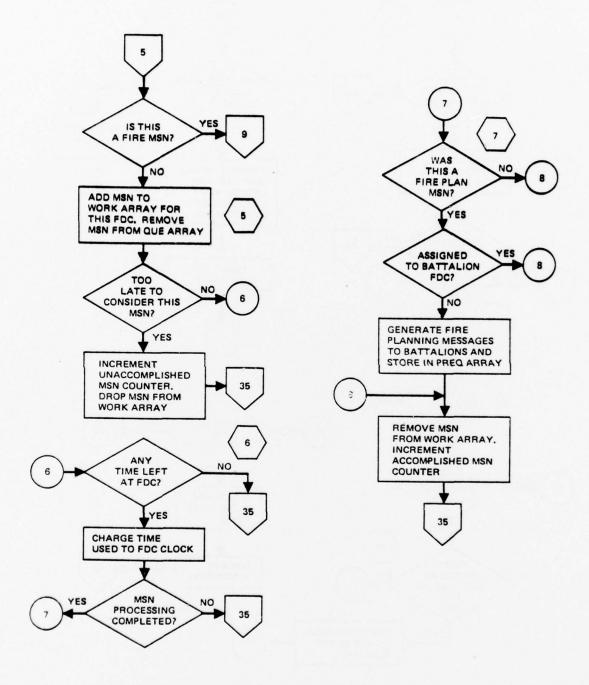


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 2 of 10)

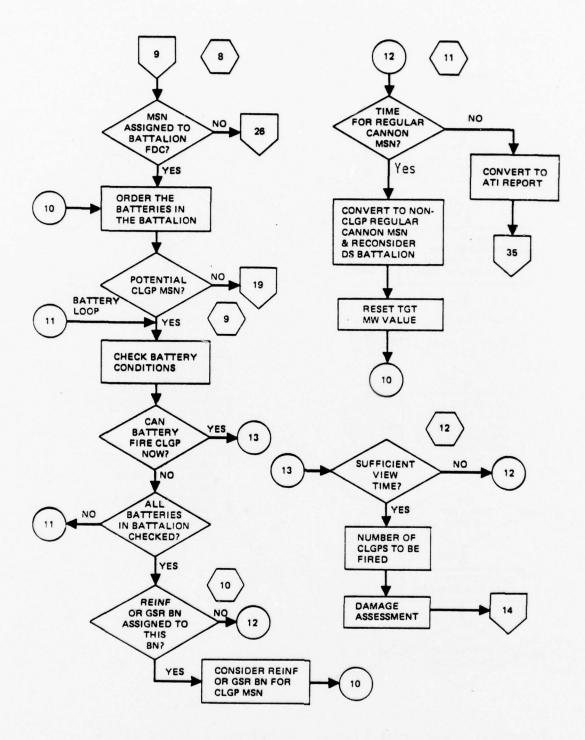


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 3 of 10)

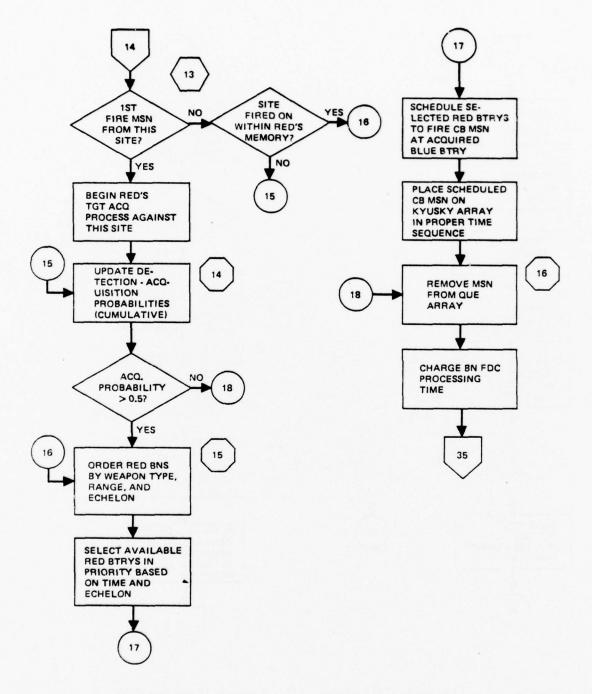


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 4 of 10)

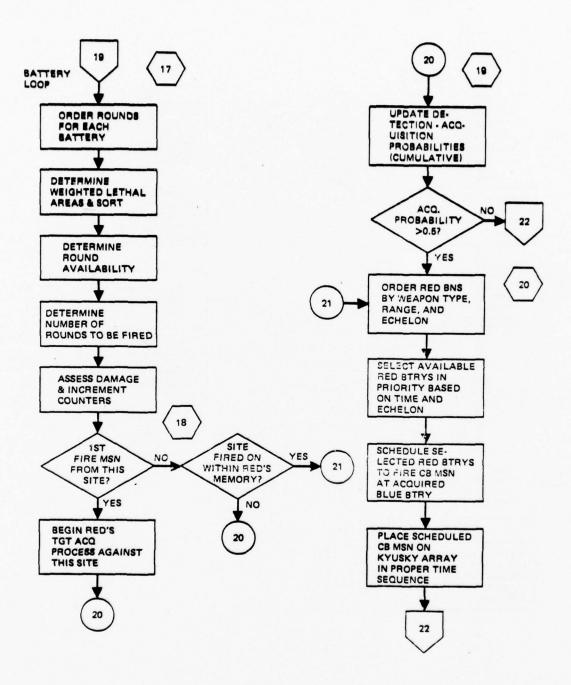


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 5 of 10)

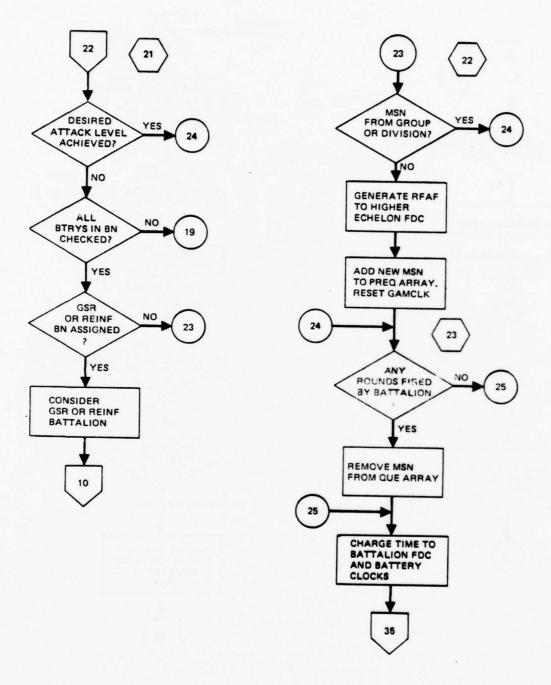


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 6 of 10)

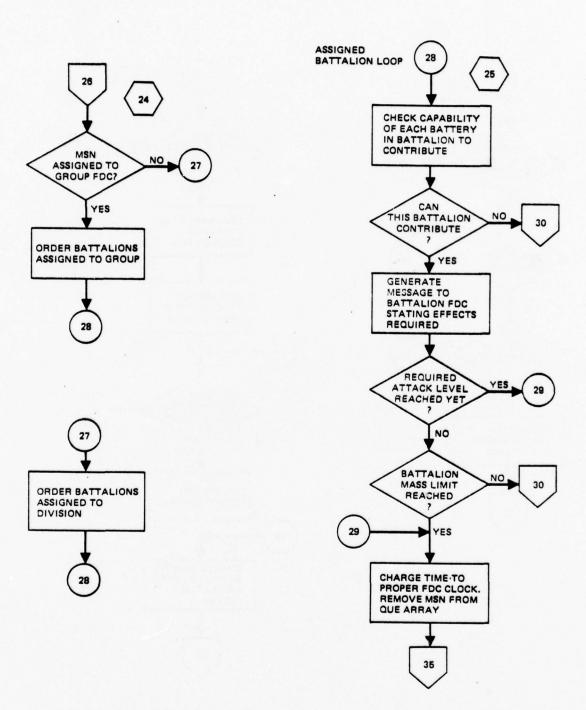


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 7 of 10)

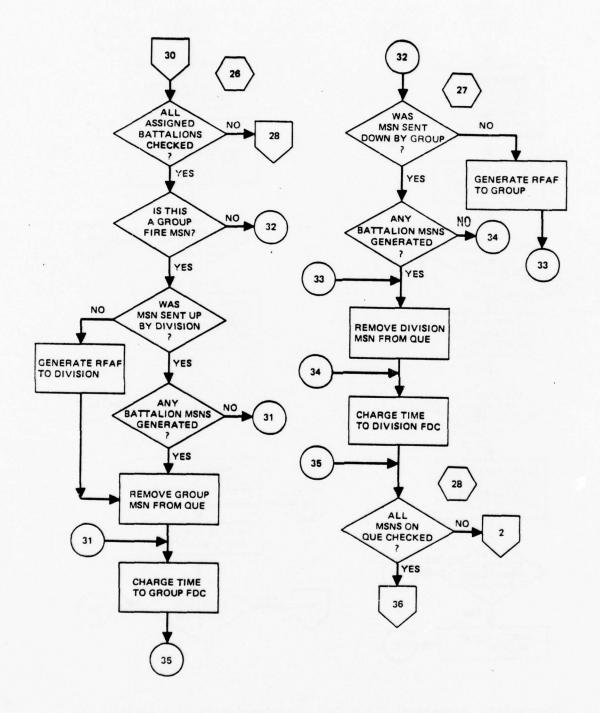


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 8 of 10)

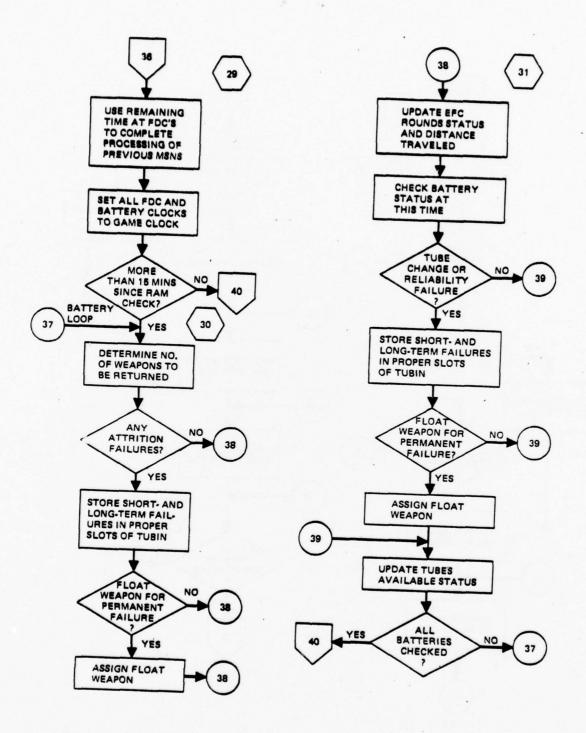


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 9 of 10)

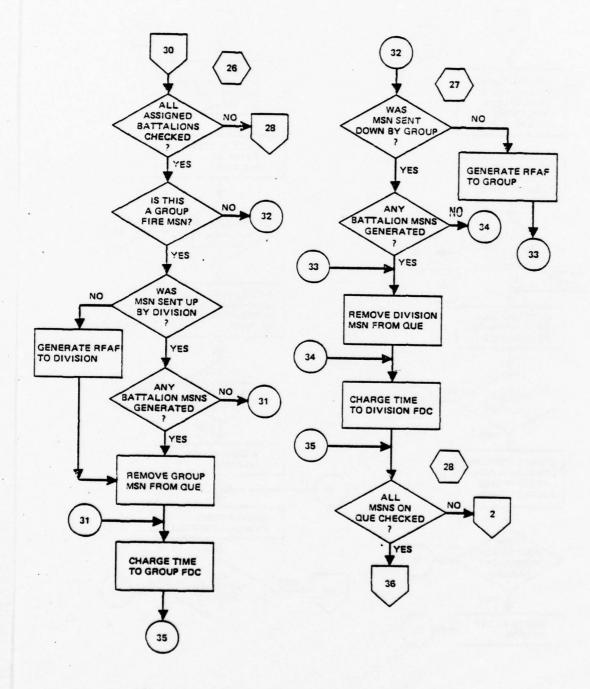


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 8 of 10)

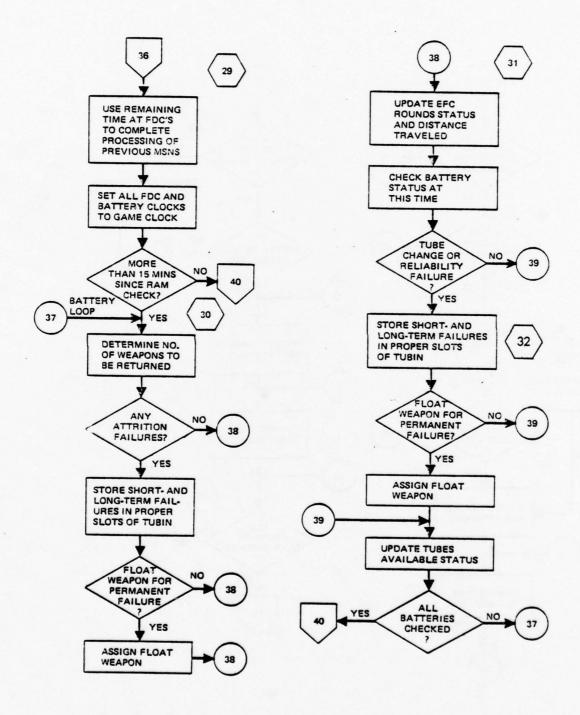


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 9 of 10)

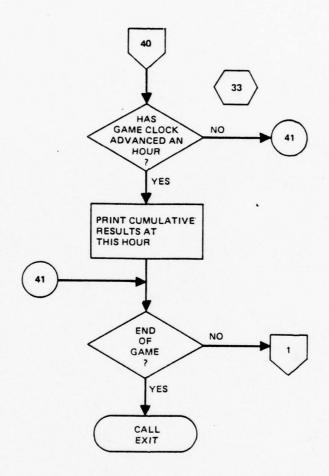


Figure 2-1. Conceptual Flowchart, AFSM Program (Page 10 of 10)

SECTION 3

INPUT

This section is used to describe the data input requirements for proper execution of the Artillery Force Simulation Model (AFSM) program. The AFSM program requires both magnetic file (Logical Unit No. 3) and punched card inputs for program execution. Both types of data input, as well as a typical punched card data deck setup, are discussed in the pages that follow.

LOGICAL UNIT NO. 3 INPUT

The majority of target data required during execution of the AFSM program are entered from a magnetic file (Logical Unit No. 3). This file contains a variable number of as many as eight different type records that may be entered during program execution. The first two type records are always required, and one or more types of the remaining six type records are required, depending upon the complexity of the problem being played. Each of the eight different record types are discussed in the paragraphs that follow.

Record Type No. 1

This type record is entered into the program immediately after a type 17 data card has been read during execution of Subroutine TABLES. Each record contains nine data values for each Red battalion being played in the scenario. The number of records entered is controlled by the value of NTBN entered on the type 17 data card. Table 3-1 contains the parameter name, format, units, and description of the nine data values contained on each record of this type.

Record Type No. 2

This type record is entered into the program immediately after the required number of type No. 1 records has been read from Logical Unit No. 3. The number of records to be read is specified by the value of NITGTS as entered on the type 17 data card. Each record of this type contains nine data values for each individual Red target element being played. Table 3-2 contains the parameter name, format, units, and description of the nine data values contained in each record of this type.

TABLE 3-1. Logical Unit No. 3 Red Battalion Input (Subroutine TABLES).

Parameter	Format	Units	Definition
SURVBN(1,I)	F8.2		ID no. of i th Red battalion
SURVBN(9,I)	F8.2		Total no. of personnel in i th Red battalion
SURVBN(10,I)	F8.2		Total no. of tanks in i th Red battalion
SURVBN(11,I)	F8.2		Total no. of APCs in i th Red battalion
SURVBN(12,I)	F8.2		Total no. of trucks in i th Red battalion
SURVBN(13,I)	F8.2		Total no. of artillery tubes in ith Red battalion
SURVBN(14,I)	F8.2		Total no. of radars in i th Red battalion
SURVBN(15,I)	F8.2		Total no. of missile launchers in ith Red battalion
SURVBN(16,I)	F8.2		Total no. of companies in i th Red battalion

NOTE: The number of records of this type that is read from Logical Unit No. 3 is determined by the value of NTBN entered on punched card type 17. The information is entered immediately after card type 17 has been entered into the program.

Record Type No. 3

This type record contains 53 data points for targets that are not part of a fire plan mission. The reading of this type record, as well as the number of records, is controlled in Subroutine RTAPE which is called many times during program execution. Table 3-3 contains information on the 53 data points appearing in this type record. Table 3-4 presents a breakdown of the target identification number (data point no. 1) and Table 3-5 presents a breakdown of the target/mission code (data point no. 3).

TABLE 3-2. Logical Unit No. 3 Individual Red Target Element Input (Subroutine TABLES).

Parameter	Format	Units	Definition
SURVNA(1,I)	F10.3		ID no. of i th individual Red target
SURVNA(9,I)	F8.2		Total no. of personnel in i th Red target
SURVNA(10,I)	F8.2		Total no. of tanks in i th Red target
SURVNA(11,I)	F8.2		Total no. of APCs in i th Red target
SURVNA(12,I)	F8.2		Total no. of trucks in i th Red target
SURVNA(13,I)	F8.2		Total no. of artillery tubes in i th Red target
SURVNA(14,I)	F8.2		Total no. of radars in i th Red target
SURVNA(15,I)	F8.2		Total no. of missile launchers in i th Red target
SURVNA(16,I)	F8.2		Total no. of next lower level subunits in i th Red target

NOTE: The number of records of this type that is read from Logical Unit No. 3 is determined by the value of NITGTS entered on punched card type 17. The records are entered immediately after the Red battalion records have been entered from Logical Unit No. 3 (see Table 3-1).

TABLE 3-3. Logical Unit No. 3 Input Records from Subroutine RTAPE (Targets Not in Fire Plans).

Data Pt.	Parameter	Format	Units	Definition
1	TAR(1)	F10.3		Target identification number (see Table 3-4 for explanation)
2	TAR(2)	F4.0	kilometers	Target distance from FEBA
3	TAR(3)	F4.0		Target identification code (<12. or >17. and <24.) (See Table 3-5 for explanation)
4	TAR(4)	F4.0		FDC number to which target acquisition is reported (= 1., Division; = 2., Corps; =3.→ 16., battalion)
5	TAR(5)	F4.0		Processing priority code (= 1. for fire missions)
6	TAR(6)	F7.2	kilometers	x - coordinate of target
7	TAR(7)	F7.2	kilometers	y = coordinate of target
8	TAR(8)	F5.0	meters	Target location error (CPE)
9	TAR(9)	F3.0		Estimated target posture
10	TAR(10)	F5.1		Estimated fractional portion of target in open environment
11	TAR(11)	F5.1		Estimated fractional portion of target in wooded environment
12	TAR(12)	F5.1		Estimated fractional portion of target in town environment
13	TAR(13)	F5.1		Estimated fractional portion of target in grassy environment
14	TAR(14)	F5.0	meters	Estimated target radius
15	TAR(15)	F6.0	minutes	Estimated arrival time at sensed position
16	TAR(16)	F6.0	minutes	Estimated departure time from sensed position

TABLE 3-3. Logical Unit No. 3 Input Records from Subroutine RTAPE (Targets Not in Fire Plans)--Contd.

Data Pt.	Parameter	Format	Units	Definition
17	TAR(17)	F7.2		Estimated military worth of target
18	TAR(18)	F3.0		Actual posture of target
19	TAR(19)	F5.1		Actual fractional portion of target in open environment
20	TAR(20)	F5.1		Actual fractional portion of target in wooded environment
21	TAR(21)	F5.1		Actual fractional portion of target in town environment
22	TAR(22)	F5.1		Actual fractional portion of target in grassy environment
23	ALF2	A6		Alphanumeric description of target
24	ALF3	A4		Alphanumeric description of target
25	TAR(23)	F4.0	meters	Actual target radius
26	TAR(24)	F5.0	minutes	Actual arrival time at sensed position
27	TAR(25)	F5.0	minutes	Actual departure time from sensed position
28	TAR(26)	F7.2		Actual military worth of target
29	TAR(27)	F3.0		Request for additional fire (RFAF) flag (set in program)
30	TAR(28)	F4.0		FDC number that processes fire mission
31	TAR(29)	F3.0		Leave blank; used in program to keep track of fractional portion of percent damage

TABLE 3-3. Logical Unit No. 3 Input Records from Subroutine RTAPE (Targets Not in Fire Plans)--Contd.

Data Pt.	Parameter	Format	Units	Definition
	T di dille cei	TOTINGE	0111 03	Deltilitation
32	TAR(30)	F4.0		Original number of personnel in the target
33	TAR(31)	F4.0		Original number of tanks in the target
34	TAR(32)	F4.0		Original number of APCs in the target
35	TAR(33)	F4.0		Original number of trucks in the target
36	TAR(34)	F4.0		Original number of artillery tubes in the target
37	TAR(35)	F4.0		Original number of radars in the target
38	TAR(36)	F4.0		Original number of missile launchers in the target
39	TAR(37)	F7.3		<pre>Target movement code (= 0., stationary; = 1., moving; = 100., stationary CLGP target = any other, view time for moving CLGP target)</pre>
40	TAR(38)	F4.0		Target identification index of enemy unit (corresponds to target's subscript in SURVNA array)
41	TAR(39)	F4.0		FDC no. to be charged process time of mission (left blank and set in program)
42	TAR(40)	F4.0		Indicates which Blue battalions have been checked in massing fire at Division against this target (left blank and set in program)

TABLE 3-3. Logical Unit No. 3 Input Records from Subroutine RTAPE (Targets Not in Fire Plans)--Concld.

Data Pt.	Parameter	Format	Units	Definition
43	TAR(41)	F4.0		Indicates Blue battalions that have been checked at Group in massing fire against this target (left blank and set in program)
44	TAR(42)	F3.0		Flag to indicate TOT mission (left blank and set in program)
45	TAR(43)	F6.2		Estimated military worth for CLGP target
46	TAR(44)	F4.2		Fractional survivors of person- nel in target at acquisition time due to non-artillery fire
47	TAR(45)	F4.2		Fractional survivors of tanks in target at acquisition time due to non-artillery fire
48	TAR(46)	F4.2		Fractional survivors of APCs in target at acquisition time due to non-artillery fire
49	TAR(47)	F4.2		Fractional survivors of trucks in target at acquisition time due to non-artillery fire
50	TAR(48)	F4.2		Fractional survivors of artil- lery tubes in target at acquis- ition time due to non-artillery fire
51	TAR(49)	F4.2		Fractional survivors of radars in target at acquisition time due to non-artillery fire
52	TAR(50)	F4.2		Fractional survivors of missile launchers in target at acquisition time due to non-artillery fire
53	ALFI	А6		Alphanumeric description of target acquisition method

TABLE 3-4. Target Identification Number Breakdown (Data Point No. 1).

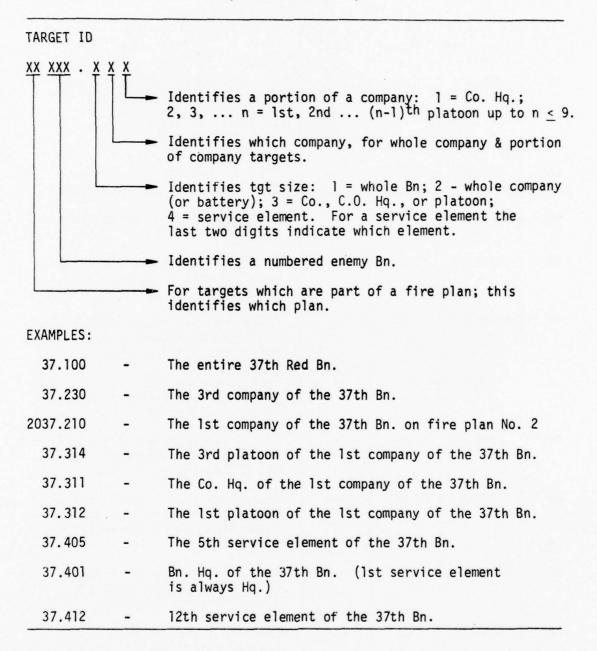


TABLE 3-5. Target/Mission Code Breakout (Data Point No. 3).

Non-fire plan Code No.	Fire plan Code No.	Type of target/mission
1	101	Artillery units
2	102	Mortar units
2 3 4 5	103	Antiaircraft artillery units
4	104	Antitank units
5	105	Missile and rocket units
6	106	APC units
7	107	Tank units
6 7 8 9	108	Command posts
	109	Observation posts
10	110	Assembly area units
11	111	Engineer units
12	112	Service elements
13	N/A	MET message
14	N/A	Survey message
15	N/A	ATI message
16	N/A	Fire plan message
17	117	Infantry units
18	118	Harassment and interdiction mission
19	119	Illumination mission
20	120	Preparatory fire mission
21	121	Counter-preparatory fire mission
22	122	Smoke mission
23	123	Final protective fire mission
24	124	Barrier mission

Record Type No. 4

This type record is another one of the six possible types entered during execution of Subroutine RTAPE. It is used to enter data for a MET message mission to the Blue force. The type of data and associated information concerning the data are presented in Table 3-6.

Record Type No. 5

The third type of record that may be entered during execution of Subroutine RTAPE contains data for a survey processing mission to be accomplished by the Blue force. Table 3-7 contains the type of data and associated information that appeared on a type No. 5 record.

TABLE 3-6. Logical Unit No. 3 Input Records from Subroutine RTAPE (MET Message Mission).

(net riessage mission):					
Data Pt.	Parameter	Format	Units	Definition	
1	TAR(1)	F10.3		MET identification number	
2	TAR(2)	F4.0		Not used; left blank	
3	TAR(3)	F4.0		MET message mission code (= 13.)	
4	TAR(4)	F4.0		FDC that receives MET message	
5	TAR(5)	F4.0		Processing priority code (= 2., MET message)	
6	TAR(6)	F7.2		Not used; left blank	
7	TAR(7)	F7.2		Not used; left blank	
8	TAR(8)	F5.0		Not used; left blank	
9	TAR(9)	F3.0		Not used; left blank	
10	TAR(10)	F5.1		Not used; left blank	
11	TAR(11)	F5.1		Not used; left blank	
12	TAR(12)	F5.1		Not used; left blank	
13	TAR(13)	F5.1		Not used; left blank	
14	TAR(14)	F5.0		Not used; left blank	
15	TAR(15)	F6.0	minutes	Arrival time of message at FDC	
16	TAR(16)	F6.0	minutes	Time that MET data were taken	
17	TAR(17)	F7.2		Not used; left blank	
18	TAR(18)	F3.0		Not used; left blank	
19	TAR(19)	F5.1		Not used; left blank	
20	TAR(20)	F5.1		Not used; left blank	
21	TAR(21)	F5.1		Not used; left blank	

TABLE 3-6. Logical Unit No. 3 Input Records from Subroutine RTAPE (MET Message Mission)--Contd.

Data Pt.	Parameter	Format	Units	Definition
22	TAR(22)	F5.1		Not used; left blank
23	ALF2	A6		Not used; left blank
24	ALF2	A4		Not used; left blank
25	TAR(23)	F4.0		Not used; left blank
26	TAR(24)	F5.0		Not used; left blank
27	TAR(25)	F5.0		Not used; left blank
28	TAR(26)	F7.2		Not used; left blank
29	TAR(27)	F3.0		Not used; left blank
30	TAR(28)	F4.0	·	Number of FDC that processes the MET message mission
31	TAR(29)	F3.0		Not used; left blank
* 32	TAR(30)	F4.0		Not used; left blank

^{*}NOTE: Data points 33 through 53 of this type record are also not used, and are therefore left blank.

TABLE 3-7. Logical Unit No. 3 Input Records from Subroutine RTAPE (Survey Processing Mission).

Data Pt.	Parameter	Format	Units	Definition
1	TAR(1)	F10.3		Survey request identification number
2	TAR(2)	F4.0		Not used; left blank
3	TAR(3)	F4.0		Survey processing mission code number (= 14.)
4	TAR(4)	F4.0		Number of FDC that receives survey processing request
5	TAR(5)	F4.0		Priority processing number (= 3. survey processing request)
6	TAR(6)	F7.2		Not used; left blank
7	TAR(7)	F7.2		Not used; left blank
8	TAR(8)	F5.0		Not used; left blank
9	TAR(9)	F3.0		Not used; left blank
10	TAR(10)	F5.1		Not used; left blank
11	TAR(11)	F5.1		Not used; left blank
12	TAR(12)	F5.1		Not used; left blank
13	TAR(13)	F5.1		Not used; left blank
14	TAR(14)	F5.0		Not used; left blank
15	TAR(15)	F6.0	minutes	Arrival time of sarvey request at FDC
16	TAR(16)	F6.0	minutes	Time when survey processing request must be finished
17	TAR(17)	F7.2		Not used; left blank
18	TAR(18)	F3.0		Not used; left blank
19	TAR(19)	F5.1		Not used; left blank

TABLE 3-7. Logical Unit No. 3 Input Records from Subroutine RTAPE (Survey Processing Mission)--Contd.

Data Pt.	Parameter	Format	Units	Definition
20	TAR(20)	F5.1		Not used; left blank
21	TAR(21)	F5.1		Not used; left blank
22	TAR(22)	F5.1		Not used; left blank
23	ALF2	A6		Not used; left blank
24	ALF3	A4		Not used; left blank
25	TAR(23)	F4.0		Not used; left blank
26	TAR(24)	F5.0		Not used; left blank
27	TAR(25)	F5.0		Not used; left blank
28	TAR(26)	F7.2		Not used; left blank
29	TAR(27)	F3.0		Not used; left blank
30	TAR(28)	F4.0		Number of FDC that processes survey request (may be changed in the program)
31	TAR(29)	F3.0		Not used; left blank
* 32	TAR(30)	F4.0		Not used; left blank

 $^{^{\}star}\text{NOTE:}\;$ Data points 33 through 53 of this type record are also not used, and therefore left blank.

Record Type No. 6

The fourth type of record possible to be entered during execution of Subroutine RTAPE is for an Artillery Target Intelligence (ATI) mission. This type record contains essentially the same information as a type No. 3 record, except that it is identified as an ATI mission (TAR(3) = 15.) and the processing priority code, TAR(5), is set equal to 3. instead of 1., which is used for a fire mission. Table 3-8 contains the type of data and associated information for an ATI mission record.

Record Type No. 7

The fifth type of record that may be entered during execution of Subroutine RTAPE is a Fire Plan Header Record. Whenever this type record is entered into the program, it is immediately followed by a specified number of type No. 8 records. The number of fire plan target records to be entered is controlled by the value of the sixth data point appearing on the type No. 7 record. Table 3-9 contains the type of data and associated information that are entered whenever a Fire Plan Header Record is called for.

Record Type No. 8

The sixth and last type of record that can be entered from Logical Unit No. 3 is the Fire Plan Target Record. As stated previously, the number of records of this type that are entered at any one time depends upon the presence of a Fire Plan Header Record and the value of the sixth data point appearing on that record. The type of data and the necessary associated information, for each data point contained on this type record, is presented in Table 3-10.

CARD READER INPUT

The AFSM program enters data via punched cards during execution of six different subroutines of the program, all of which are called sequentially from the MAIN Routine. The purpose of the punched card inputs entered during execution of each subroutine follows.

Subroutine TABLES Input Cards

This subroutine is used to enter miscellaneous program flags and parameters used to select various options available to the user. It is also used to enter data records from Logical Unit No. 3 after Data Card Type 17 has been processed. The input parameters required on each type

TABLE 3-8. Logical Unit No. 3 Input Records from Subroutine RTAPE (Artillery Target Intelligence Mission).

Data Pt.	Parameter	Format	Units	Definition
1	TAR(1)	F10.3		Target identification number (see Table 3-4 for explanation)
2	TAR(2)	F4.0	kilometers	Target distance from FEBA
3	TAR(3)	F4.0		Mission identification code (= 15.)
4	TAR(4)	F4.0		FDC number to which target acquisition is reported (= 1., Division; = 2., Group; = 3. to 16. battalion)
5	TAR(5)	F4.0		Processing priority code (= 3. for ATI missions)
6	TAR(6)	F7.2	kilometers	x - coordinate of target
7	TAR(7)	F7.2	kilometers	y - coordinate of target
8	TAR(8)	F5.0	meters	Target location error (CPE)
9	TAR(9)	F3.0		Estimated target posture
10	TAR(10)	F5.1		Estimated fractional portion of target in open environment
11	TAR(11)	F5.1		Estimated fractional portion of target in wooded environment
12	TAR(12)	F5.1		Estimated fractional portion of target in town environment
13	TAR(13)	F5.1		Estimated fractional portion of target in grassy environment
14	TAR(14)	F5.0	meters	Estimated target radius
15	TAR(15)	F6.0	minutes	Estimated arrival time at sensed position
16	TAR(16)	F6.0	minutes	Estimated departure time from sensed position

TABLE 3-8. Logical Unit No. 3 Input Records from Subroutine RTAPE (Artillery Target Intelligence Mission) -- Contd.

Data Pt.	Parameter	Format	Units	Definition
17	TAR(17)	F7.2		Estimated military worth of target
18	TAR(18)	F3.0		Actual posture of target
19	TAR(19)	F5.1		Actual fractional portion of target in open environment
20	TAR(20)	F5.1		Actual fractional portion of target in wooded environment
21	TAR(21)	F5.1		Actual fractional portion of target in town environment
22	TAR(22)	F5.1		Actual fractional portion of target in grassy environment
23	ALF2	A6		Alphanumeric description of target
24	ALF3	A4		Alphanumeric description of target
25	TAR(23)	F4.0	meters	Actual target radius
26	TAR(24)	F5.0	minutes	Actual arrival time at sensed position
27	TAR(25)	F5.0	minutes	Actual departure time from sensed position
28	TAR(26)	F7.2		Actual military worth of target
29	TAR(27)	F3.0		Request for additional fire (RFAF) flag
30	TAR(28)	F4.0		FDC number that processes fire mission
31	TAR(29)	F3.0		Leave blank, used in program to keep track of fractional portion of damage

TABLE 3-8. Logical Unit No. 3 Input Records from Subroutine RTAPE (Artillery Target Intelligence Mission)--Contd.

		, ,		
Data Pt.	Parameter	Format	Units	Definition
32	TAR(30)	F4.0		Original number of personnel in the target
33	TAR(31)	F4.0		Original number of tanks in the target
34	TAR(32)	F4.0		Original number of APCs in the target
35	TAR(33)	F4.0		Original number of trucks in the target
36	TAR(34)	F4.0		Original number of artillery tubes in the target
37	TAR(35)	F4.0		Original number of radars in the target
38	TAR(36)	F4.0		Original number of missile launchers in the target
39	TAR(37)	F7.3		<pre>Target movement code (= 0., stationary; = 1., moving; = 100., stationary CLGP tgt; any other, view time for moving CLGP target)</pre>
40	TAR(38)	F4.0		Target identification index of Red battalion
41	TAR(39)	F4.0		FDC no. to be charged process time of mission (left blank and set in program)
42	TAR(40)	F4.0		Same as defined in Table 3-3, but not applicable if target comes off Logical Unit No. 3 as an ATI mission, as opposed to being converted to ATI mission in the program

TABLE 3-8. Logical Unit No. 3 Input Records from Subroutine RTAPE (Artillery Target Intelligence Mission)--Concld.

Data Pt.	Parameter	Format	Units	Definition
43	TAR(41)	F4.0		Same as defined in Table 3-3, but not applicable if target comes off Logical Unit No. 3 as an ATI mission, as opposed to being converted to ATI mission in the program
44	TAR(42)	F3.0		Not used; left blank
45	TAR(43)	F6.2		Estimated military worth for CLGP target
46	TAR(44)	F4.2		Fractional survivors of person- nel in target at acquisition time due to non-artillery fire
47	TAR (45)	F4.2		Fractional survivors of tanks in target at acquisition time due to non-artillery fire
48	TAR(46)	F4.2		Fractional survivors of APCs in target at acquisition time due to non-artillery fire
49	TAR(49)	F4.2		Fractional survivors of trucks in target at acquisition time due to non-artillery fire
50	TAR(48)	F4.2		Fractional survivors of artil- lery tube in target at acquisi- tion time due to non-artillery fire
51	TAR(49)	F4.2		Fractional survivors of radars in target at acquisition time due to non-artillery fire
52	TAR(50)	F4.2		Fractional survivors of missile launchers in target at acquisition time due to non-artillery fire
53				Alphanumeric description of tar- get acquisition method

TABLE 3-9. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Header Record).

Data Pt.	Parameter	Format	Units	Definition
1	TAR(1)	F10.3		Fire plan identification number (1000, 2000, 3000, etc)
2	TAR(2)	F4.0		Not used; left blank
3	TAR(3)	F4.0		Mission identification code (= 16., fire plan mission)
4	TAR(4)	F4.0		Number of FDC that receives fire plan request
5	TAR(5)	F4.0		Priority processing code (= 4 for fire plan request)
* 6	TAR(6)	F7.2		Number of targets in the fire plan
7	TAR(7)	F7.2		Flag to indicate status of fire plan (= 0.0, processing not completed; = 1.0, processing completed)
8	TAR(8)	F5.0		Not used; left blank
9	TAR(9)	F3.0		Not used; left blank
10	TAR(10)	F5.1		Not used; left blank
11	TAR(11)	F5.1		Not used; left blank
12	TAR(12)	F5.1		Not used; left blank
13	TAR(13)	F5.1		Not used; left blank
14	TAR(14)	F5.0		Not used; left blank
15	TAR(15)	F6.0	minutes	Arrival time of fire plan request at FDC

^{*}NOTE: The number of record types identified in Table 3-10 is specified by the number of targets in the fire plan; 1 record per target each time a fire plan header card is entered.

TABLE 3-9. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Header Record)--Contd.

Data Pt.	Parameter	Format	Units	Definition
Data Ft.	rarameter	rorijat	011165	Delinition
16	TAR(16)	F6.0	minutes	Time that fire plan processing must be completed
17	TAR(17)	F7.2		Number of targets assigned to first battalion selected
18	TAR(18)	F3.0		Number of targets assigned to second battalion selected
19	TAR(19)	F5.1		Number of targets assigned to third battalion selected
20	TAR(20)	F5.1		Number of targets assigned to fourth battalion selected
21	TAR(21)	F5.1		Number of targets assigned to fifth battalion selected
22	TAR(22)	F5.1		Number of targets assigned to sixth battalion selected
23	ALF2	A6		Not used; left blank
24	ALF3	A4		Not used; left blank
25	TAR(23)	F4.0		Number of targets assigned to seventh battalion selected
26	TAR (24)	F5.0		Number of targets assigned to eighth battalion selected
27	TAR(25)	F5.0		Number of targets assigned to ninth battalion selected
28	TAR(26)	F7.2		Number of targets assigned to tenth battalion selected
29	TAR(27)	F3.0		Number of targets assigned to eleventh battalion selected

TABLE 3-9. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Header Record)--Concld.

Data Pt.	Parameter	Format	Units	Definition	
30	TAR(28)	F4.0		Number of targets assigned to twelfth battalion selected	
31	TAR(29)	F3.0		Number of targets assigned to thirteenth battalion selected	
* 32	TAR(30)	F4.0		Number of targets assigned to fourteenth battalion selected	

^{*}NOTE: Data points 33 through 53 of this type record are not used, and therefore left blank.

of data card, entered during execution of this subroutine, are contained on Data Card Type 1 through Data Card Type 23, respectively.

Subroutine SYSTEM Input Cards

Data associated with each artillery weapon system being played in the game are entered during execution of this subroutine. The input parameters required on each data card are illustrated on Data Card Types 24 through 26e. The program ignores data entered for systems that are not keyed in by a "l" on card type 25a or 25b.

Subroutine ROUND Input Cards

Data Card Types 27 through 40 are entered into the program during execution of this subroutine. Data for rounds not associated with the systems selected in Subroutine SYSTEM are entered but ignored by the program. Table 3-11 lists the type of data that appear on additional type 31 cards when the round in question is an HE round.

Subroutine FUFDC Input Cards

This subroutine is used to enter movement schedules and site coordinates for Blue FDCs and Blue batteries being played in the game. In addition, it is used to enter "Rounds Allowed" data for the various

environments of the game, scenario boundaries when applicable, as well as FEBA trace data. Data Card Types 41 through 56 are used to illustrate the parameters required for proper execution of this subroutine.

Subroutine WPMIX Input Cards

Data Card Types 57 through 82 are read during execution of this subroutine. The cards contain values for tactical assignments of Blue battalions, times required for various Blue FDC functions, Blue battalion ordering, and tube wear and distance traveled between various types of failures.

Subroutine REDIN Input Cards

The last subroutine used to enter input data via punched cards is this one. Data Card Types 83 through 87 are used to enter data for Red battalions, Red batteries, as well as movement and site schedules for the Red batteries.

DATA DECK SETUP

A typical AFSM punched card data deck setup is depicted in Figure 3-1. The figure is used to illustrate the various types of cards that are required when all input options of the program are exercised. As such, it serves only to illustrate a possible, but not necessarily a realistic, input data deck.

TABLE 3-10. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Target).

		•		
Data Pt.	Parameter	Format	Units	Definition
1	TFP(1,J)	F10.3		Identification number of j th target in fire plan
2	TFP(2,J)	F4.0	kilometers	j th target distance from FEBA
3	TFP(3,J)	F4.0		j th target identification code (\geq 101. and \leq 112. or \geq 117. and \leq 124.)
4	TFP(4,J)	F4.0		FDC number to which j th target acquisition is reported (= 1., Division; = 2., Corps; = 3. to 16., battalion)
5	TFP(5,J)	F4.0		Processing priority code (= 4., fire plan)
6	TFP(6,J)	F7.2	kilometers	x - coordinate of j th target
7	TFP(7,J)	F7.2	kilometers	y - coordinate of j th target
8	TFP(8,J)	F5.0	meters	j th target location error (CPE)
9	TFP(9,J)	F3.0		Estimated posture of j th target
10	TFP(10,J)	F5.1		Estimated fractional portion of jth target in open environment
11	TFP(11,J)	F5.1		Estimated fractional portion of j th target in wooded environment
12	TFP(12,J)	F5.1		Estimated fractional portion of j th target in town environment
13	TFP(13,J)	F5.1	×	Estimated fractional portion of jth target in grassy environment
14	TFP(14,J)	F5.0	meters	Estimated radius of j th target
15	TFP(15,J)	F6.0	minutes	Estimated arrival time of j th target at sensed position

TABLE 3-10. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Target)--Contd.

Data Pt.	Parameter	Format	Units	Definition				
16	TFP(16,J)	F6.0	minutes	Estimated departure time of j th target from sensed position				
17	TFP(17.J)	F7.2		Estimated military worth of j th target				
18	TFP(18,J)	F3.0		Actual posture of j th target				
19	TFP(19,J)	F5.1		Actual fractional portion of j th target in open environment				
20	TFP(20,J)	F5.1		Actual fractional portion of j th target in wooded environment				
21	TFP(21,J)	F5.1		Actual fractional portion of j th target in town environment				
22	TFP(22,J)	F5.1		Actual fractional portion of j th target in grassy environment				
23	TFP(23,J)	A6	meters	Actual radius of j th target				
24	TFP(24,J)	A4	minutes	Actual arrival time of j th target at sensed position				
25	TFP(25,J)	F4.0	minutes	Actual departure time of j th target from sensed position				
26	TFP(26,J)	F5.0		Actual military worth of j th target				
27	TFP(27,J)	F5.0		Request for additional fire (RFAF) flag against j th target				
28	TFP(28,J)	F7.2		FDC number that processes fire mission against j th target				
29	TFP(29,J)	F3.0		Number of 155-mm equivalent volleys to be fired at this fire plan target				
30	TFP(30,J)	F4.0		Original number of personnel in jth target				

TABLE 3-10. Logical Unit No. 3 Input Records from Subroutine RTAPE (Fire Plan Target)--Concld.

Data Pt.	Parameter	Format	Units	Definition
31	TFP(31,J)	F3.0		Original number of tanks in j th target
32	TFP(32,J)	F4.0		Original number of APCs in j th target
33	TFP(33,J)	F4.0		Original number of trucks in j th target
34	TFP(34,J)	F4.0		Original number of artillery tubes in j th target
35	TFP(35,J)	F4.0		Original number of radars in jth target
36	TFP(36,J)	F4.0		Original number of missile launchers in j th target
37	TFP(37,J)	F4.0		<pre>jth target movement code (= 0., stationary; = 1., moving)</pre>
38	TFP(38,J)	F4.0		j th target identification index of enemy battalion
39	TFP(39,J)	F7.3		FDC no. to be charged process time of mission (left blank and set in program)
40	TFP(40,J)	F4.0		Not applicable
41	TFP(41,J)	F4.0		Not applicable
42	TFP(42,J)	F4.0		Not applicable
43	TFP(43,J)	F4.0		Not applicable

NOTE: The number of Table 3-10 type records for a fire plan is determined by the value of TAR(6) as entered from a Table 3-9 type record.

Card: 1	A B C D E F G H I J K L M N O P	Description				4.	only.				NOTE: This must be the first card of the input data deck. It may be a blank card, if so desired, but it must precede all other cards of the deck.
	F G	Columns	9-1	01-9	11-15			•	71-75	08-92	
	D E	Format	A5	A5	A5			•	A5	A5	
10N	C C Shelington strengten	Units	1	1	I				1		
MIX IDENTIFICATION	A B	Parameter	CXID(1)	CXID(2)	CXID(3)	•	•	•	(SI)QIX)	(9L)QIXO	
		ID	A	В	ပ				0	۵	

			et						Card: 2
Card: 2	A B C D E F G G Sport eigher eigher eigher eigher eigher sign ingineration ingineration ingineration ingineration indicates the second eigher eigher in indicates the second eigher eigher eigh	Description	Additional time required to process a time-on-target (TOI) mission	Suppression subroutines control flag (=1.0, call subroutines; =0.0, bypass subroutines)	Duration of suppression after cessation of counterbattery fire	Blue battery defeat level	Flag for Blue personnel loss consideration (= 0.0, personnel losses not a limiting factor; = 1.0, personnel losses are recorded and may result in defeat of battery)	Flag to indicate scenario being played; i.e., scenario identification number	Flag to indicate that CLGP round is allowed (= 0.0, CLGP rounds allowed; = 1.0, CLGP rounds not allowed)
	D szipszszen zentesz	Columns	8-	9-16	17-24	25-32	33-40	41-48	49-56
	C C Seps 20 22/22 23 24/25 2	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2
L FLAGS	B 8 9 10 11 12 13 14 15 16 17	Units	minutes	-	minutes	1	1	1	
PROGRAM CONTROL	A 123/156/20	Parameter	МТТОТ	SPRKEY	SPRET	BLDFLV	PERSFG	SCENAR	CLGP
PR		ID	A	8	S	0	ш	ட	o o

		T		Card: 3
Card: 3	eschunding and an an an		ате	
	A ११३ हिर्ग स्थानम्बर् गामन्तरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम् वरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम ्बरम्बरम्बरम्बरम् बरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम्बरम्	Description	Number of Red batteries in the game	
	भ्यात्र विक्र स्व व्योग	Columns	1-5	
	Cape to talke or opto	Format	15	
SATTERIES	u sign serenge s	Units	-	
NUMBER OF RED BATTERIES	A . 1 3 4 5 617	Parameter	NREDBT	
N		ID	A	

Card: 4	A B C D E F G H Sometime of the contraction of the	Description		Game start time	Time of first printout	Game end time	Time that initial MET data were taken	Maximum number of round types allowed per battery per fire plan in SAVRD, IDRDSV, RDSVK, RDSV, TGSV, and SVMM arrays	Number of estimated Red postures	Maximum number of fire plans that can be entered from target tape based on current array dimensions. There may be fewer than this number of fire plans on the tape	Maximum number of fire plans allowable in SMFP and FIRPL arrays	
		Columns		1-8	9-16	17-24	25-32	33-37	38-42	43-47	48-52	
NOI	C 1849 20 2422 23 2425 24	Format		F8.2	F8.2	F8.2	F8.2	15	15	15	15	
AL INFORMAT	B B III I A II I I I I I I I I I I I I I I	Units		minutes	hours	minutes	minutes	1	1	1	1	
SCENARIO GENERAL INFORMATION	A 1 2 3 4 5 6 7	Parameter		TZRO	TSTART	TMX	TMETZO	NRFP	NESTP	NPLNIN	NPLNS	
SCI		ID	•	Α.	В	၁	0	ш	ш	5	Ξ	

											Card:	5
Card: 5	A B C D E F G C D E F G C D E F A C D E F A C C D E F A C C D C C D C C C C C C C C C C C C C	Description		Maximum number of missions in QUE array	Maximum number of missions in PREQ array	Maximum number of Red units allowed in DAMAGE array	Maximum number of targets (tape input) per fire plan in TFP array	Maximum number of additional battery fire plan missions (machine-generated) in TTFP array	Maximum number of tape input and machine-generated missions per fire plan in FP array	Maximum number of missions per battery per fire plan in RDSV, TGSV, and SVMW arrays		
	F G	Columns		1-5	9-10	11-15	16-20	21-25	26-30	31-35		
	D E	Format	•	15	15	15	15	15	15	15		
TONS DATA	B C C	Units		1	1	1		1		1		
FIRE PLAN MISSIONS	A 1 2 3 4 5 6 7 0	Parameter		MAXQ	MAXPQ	MAXND	MAXTFP	MXTTFP	MAXFP	MXBYPN		
FI		ID		A	В	ပ	0	ш	Щ	5		

						Card: 6
Card: 6	A B C C C C C C C C C C C C C C C C C C	Description	Scale factor for computing number of Red tanks killed by CLGP rounds	Scale factor for computing number of Red APCs killed by CLGP rounds	Scale factor for computing number of Red trucks killed by CLGP rounds	
	प्रमान अक्रमा	Columns	9-1	7-12	13-18	
	85 25 02 52 22 12 02 61 01	Format	F6.1	F6.1	F6.1	
TORS	B C	Units		ļ	1	
CLGP SCALE FACTORS	A 1 2 3 4 5 6 7 8	Parameter	CLGPSF(1)	CLGPSF(2)	CLGPSF(3)	
CL		OI	A	ω	U	

									Card: 7
Card: 7	A B C D E F F F F F F F F F F F F F F F F F F	Description	Minimum time required to fire a CLGP fire mission	Minimum time required for Red force to acquire a Blue battery as a target	No longer used in program	Red counterbattery target memory time (If a Blue battery fires a mission from a site within TMT minutes after receiving fire at that site, Red will immediately recognize the source of fire and schedule counterfire)	Time required to get float from Division level	Time required to get float from Group level	
	E F	Columns	9-1	7-12	13-18	19-24	25-30	31-36	
AM	D September	Format	F6.1	F6.1	F6.1	F6.1	F6.1	F6.1	
TS IN PROGRAM	B C	Units	minutes	minutes	minutes	minutes	hours	hours	
TIME CONSTRAINTS IN	A 1 2 3 4 5 6 7 .	Parameter	TFCLM	ACQMIN	RIFMIN	TMT	TTGF(1)	TIGF(2)	
I		ID	A	8	၁	٥	ш	ш	

									_				Card:	8	
Card: 8	As I C	Description	Identification number of first Blue weapon system	Identification number of second Blue weapon system	Identification number of third Blue weapon system	Identification number of fourth Blue weapon system	Identification number of fifth Blue weapon system	Identification number of sixth Blue weapon system	Identification number of seventh Blue weapon system	Identification number of eighth Blue weapon system	Identification number of ninth Blue weapon system	Identification number of tenth Blue weapon system	Identification number of eleventh Blue weapon system		
BERS	F V G s 27/20 20/04/21 32 33/24	Columns	1-4	6-9	11-14	16-19	21-24	26-29	31-34	36-39	41-44	46-49	51-54		
ATION NUM	10 E V	Format	14	14	14	14	14	14	14	14	14	14	14		
IDENTIFIC	C D D	Units	1	1	-	1	1	-	1	1	1	1	1		
WEAPON SYSTEM IDENTIFICATION NUMBERS	A A B	Parameter	(I) ISYSII	IISYST(2)	IISYST(3)	IISYST(4)	IISYST(5)	IISYST(6)	IISYST(7)	IISYST(8)	IISYST(9)	11SYST(10)	IISYST(11)		
		ID	A	В	၁	0	ш	ഥ	5	Ξ	Н	J	~		

									_				Ca	rd:	9		
Card: 9	F G H H I I J K L L L L L L L L L L L L L L L L L L	Description	Alphanumeric identifier of first column	Alphanumeric identifier of second column	Alphanumeric identifier of third column	Alphanumeric identifier of fourth column	Alphanumeric identifier of fifth column	Alphanumeric identifier of sixth column	Alphanumeric identifier of seventh column	Alphanumeric identifier of eighth column	Alphanumeric identifier of ninth column	Alphanumeric identifier of tenth column	Alphanumeric identifier of eleventh column	Alphanumeric identifier of twelfth column			
_	E NF		1-4	7-10	13-16	19-22	25-28	31-34	37-40	43-46	49-52	55-58	61-64	67-72			
OPY OUTPL	C C C C C C C C C C C C C C C C C C C	Format	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A4	A6			
FOR HARD (B C Special Section 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 14 18 18 18 18 18 18 18 18 18 18 18 18 18	Units	+	1	1	-	-	-	1	-	1	-	-	-			
COLUMN HEADERS FOR HARD COPY OUTPUT	A A B	Parameter	COLHDR(1)	COLHDR(2)	COLHDR(3)	COLHDR(4)	COLHDR(5)	COLHDR(6)	COLHDR(7)	COLHDR(8)	COLHDR(9)	COLHDR(10)	COLHDR(11)	COLHDR(12)			
8		ID	А	В	ပ	O	П	ш	9	I	I	J	×	_			

														Caro	1: 1	0a	
Card: 10a	A B C D E F G H H I J K A STANDER STAN	Description		Alphanumeric identifier of first row of output	Alphanumeric identifier of second row of output	Alphanumeric identifier of third row of output	Alphanumeric identifier of fourth row of output	Alphanumeric identifier of fifth row of output	Alphanumeric identifier of sixth row of output	Alphanumeric identifier of seventh row of output	Alphanumeric identifier of eighth row of output	Alphanumeric identifier of ninth row of output	Alphanumeric identifier of tenth row of output	Alphanumeric identifier of eleventh row of output			
UT	E 27 PA 28 30(2) 32 33(34)	Columns	,	9-1	8-13	15-20	22-27	29-34	36-41	43-48	50-55	57-62	69-69	71-76			
HARD COPY OUTPUT	C \ \ D C 22 22 2491	Format		A6	A6	A6	A6	A6	A6	A6	A6	A6	A6	A6			
	B Antakanahen	Units		1	1	1	1	1	1	1	1	1	1	1			
ROW IDENTIFIERS FOR	A A S 1 2 3 4 5 6 W	Parameter		ROWHDR(1)	ROWHDR(2).	ROWHDR(3)	ROWHDR(4)	ROWHDR(5)	ROWHDR(6)	ROWHDR(7)	ROWHDR(8)	ROWHDR(9)	ROWHDR(10)	ROWHDR(11)			
ROM		ID		Α.	80	ပ	٥	Ш	LL	9	Ι	I	2	×			

Card: 10b	A B C D D E Service de la completa del completa de la completa del completa de la completa del la completa de la completa del la	Description	Alphanumeric identifier of twelfth row of output	Alphanumeric identifier of thirteenth row of output	Alphanumeric identifier of fourteenth row of output	Alphanumeric identifier of fifteenth row of output	Alphanumeric identifier of sixteenth row of output	Card: 10b
TU	E E	Columns	1-6	8-13	15-20	22-27	29-34	
HARD COPY OUTPUT	D Doc et a	Format	A6	A6	A6	A6	A6	
FOR	B C C	Units		1		1	-	
ROW IDENTIFIERS	A 5 1 5 6 5 1	Parameter	ROWHDR(12)	ROWHDR(13)	ROWHDR(14)	ROWHDR(15)	ROWHDR(16)	
RO		ID	A	8	ပ	0	ш	

		T				r	_	Card	: 11a	
Card: 11a	C D E F G H I J J	Description	Number of 122-mm HE rounds Red force will expend in counterbattery fire for ranges ≤ 8 km against a towed battery target	Coefficients for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a towed battery target	Coefficients for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a towed battery target	Number of 122-mm HE rounds Red force will expend for ranges ≥ 16 km against a towed battery target	Number of 122-mm HE rounds Red force will expend in counterbattery fire for ranges < 8 km against a self-propelled unarmored battery target	Coefficients for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a self-propelled unarmored battery target	Coefficients for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a self-propelled unarmored battery target	
TS	E F	Columns	1-5	6-12	13-19	20-24	25-30	31-37	38-45	
OEFFICIEN	C CZ ZZ CZ 02 840	Format	F5.0	F7.4	F7.5	F5.0	F6.0	F7.4	F8.6	
EM/RANGE C	B C	Units	1	kilo- meters-2	kilo- meters ⁻⁴	-	1	kilo- meters ⁻²	kilo- meters-4	
RED WEAPON SYSTEM/RANGE COEFFICIENTS	A B	Parameter	COF122(1,1)	COF122(1,2)	COF122(1,3)	COF122(1,4)	COF122(2,1)	COF122(2,2)	COF122(2,3)	
RED		ID	A	ω	U	0	ш	ш	G	

						Card:	11a
Card: 11a	A B C D E F G H I J J J J J J J J J J J J J J J J J J	Description	Number of 122-mm HE rounds Red force will expend for range ≥ 16 km against a self-propelled unarmored battery target	Number of 122-mm HE rounds Red force will expend in counterbattery fire for ranges ≤ 8 km against a self-propelled armored battery target	Coefficient for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a self-propelled armored battery target		
TS	E F	Columns	46-50	51-55	56-61		
DEFFICIEN	D 05 525 525 526 578	Format	F5.0	F5.0	F6.3		
EM/RANGE CO	B C	Units	-	1	kilo- meters ⁻²		
RED WEAPON SYSTEM/RANGE COEFFICIENTS	A 1 2 3 4 5 6 7 6	Parameter	COF122(2,4)	COF122(3,1)	COF122(3,2)		
REC		ID	Ξ	н	r		

						Card: 1	1b	
Card: 11b	सार हा हा हा हा उत्तर स्वर्धन का नोक का नोक हा होड़ के कोड़ कर कोड़ कर कोड़ का कोड़ का कोड़ का स्वर्ध का नोब कर कोड़ कर कोड़ सार होता है। कोड़ा कोड़ा का कोड़ का कोड़ा का	Description	Coefficient for additional 122-mm HE rounds Red force will expend for 8 km < range < 16 km against a self-propelled armored battery target	Number of 122-mm HE rounds Red force will expend for ranges ≥ 16 km against a self-propelled armored battery target		our u. I		
LS	5 15 15 15 15 15 15 15 15 15 15 15 15 15	Columns	1-8	9-13				
DEFFICIENT	स्ट्रेस्ट स्ट्रायक्ट स्ट्रेड	Format	F8.6	F5.0				
EM/RANGE CO	B spenialisten	Units	kilo- meters-4	1				
WEAPON SYSTEM/RANGE COEFFICIENTS	A B	Parameter	COF122(3,3)	COF122(3,4)			*	
RED		ID	A	æ				

						Card: 12
Card: 12	B () हो १ व क्षेत्रा स्थान स्थान सम्मान सम्मान सम्मान सम्मान सम्भान सम्भान सम्भान सम्भान सम्भान सम्भान समान समान सम	Description	Number of target environments in scenario (2 \leq NEV \leq 4)	Number of target elements in scenario (≤ 9)	Number of target postures in scenario (NESTP < NPOST < 18) Where NESTP is as defined on card 3	
POSTURES	स्कृतस्य जीव स्टार्मान	Columns	1-5	9-10	11-15	
ENTS, AND	nespectation sign	Format	51	15	15	
ENVIRONMENTS, ELEMENTS, AND POSTURES	C C She ii 12 13 14 15 16 17	Units		1	-	
TARGET ENVIRONME	A B	Parameter	NEV	NE	NPOST	
TAR		ID	A	8	ပ	

		T							ard: 13	
Card: 13	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Fraction of unwarned personnel standing for jth posture	Fraction of unwarned personnel prone for j th posture	Fraction of unwarned personnel crouching for j th posture	POST(I,J) = 1.0 for $3 < I < 10$ indicates that element (I-2) is the critical element for targets with posture J	POST(I,J) = 1.0 for $3 < I < 10$ indicates that element (I-2) is the critical element for targets with posture J	POST(I,J) = 1.0 for $3 < I < 10$ indicates that element (I-2) is the critical element for targets with posture J	POST(I,J) = 1.0 for $3 < I < 10$ indicates that element (I-2) is the critical element for targets with posture J	POST(I,J) = 1.0 for $3 < I < 10$ indicates that element (I-2) is the critical element for targets with posture J
1TA	D 27pe 23 30pr 12 13ps 3	Format Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64
OSTURE DA	C 1985 20 21/22 23 24/25 24	Format	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3
ELEMENTS	B sherrigizia isher	Units	-	-	-	-	1	1	1	
UNWARNED TARGET ELEMENTS POSTURE DATA	A 1 2 3 4 5 6 7 8	Parameter	POST(1,J)	POST(2,J)	POST(3,J)	POST(4,J)	POST(5,J)	POST(6,J)	POST(7,J)	POST(8,J)
NNN		OI	A	В	υ.	0	ш	Щ	5	Ξ

			nt		Card:	13
Card: 13	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	POST(I,J) = 1.0 for 3 < I < 10 indicates that element (I-2) is the critical element for targets with posture J NOTE: A card of this type is required for each posture in the scenario. Each card of this type l4 card.	Maximum number of cards is 18.		
ATA	O States as adva	Columns	65-72			
OSTURE DA	C	Format	F8.3			
ELEMENTS POSTURE DATA	B spenialististism	Units	1			
UNWARNED TARGET	A 123/456/1	Parameter	POST(9,J)			
NN		ID	I			

										Card:	14	
Card: 14	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Fraction of warned personnel standing for j th posture	Fraction of warned personnel prone for j th posture	Fraction of warned personnel crouching for j th posture	POST(I,J) = 1.0 for I \geq 13 indicates that element (I-2) is critical element for posture J	$POST(I,J) = 1.0$ for $I \ge 13$ indicates that element (I-2) is critical element for posture J	POST(I,J) = 1.0 for I \geq 13 indicates that element (I-2) is critical element for posture J	$POST(I,J) = 1.0$ for $I \ge 13$ indicates that element (I-2) is critical element for posture J	$POST(I,J) = 1.0$ for $I \ge 13$ indicates that element (I-2) is critical element for posture J		
A	C rape es rapes	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64		
STURE DAT	C - 22 24 25 24 25 2	Format	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3	F8.3		
EMENTS POS	B shenistiniershen	Units	1	1		1	1	1	1	1		
WARNED TARGET ELEMENTS POSTURE DATA	A 1 2 3 4 5 6 7 8	Parameter	POST(10,J)	POST(11,J)	POST(12,J)	POST(13,J)	POST(14,J)	POST(15,J)	POST(16,J)	POST(17,J)		
WAR		ID	A	8	J	0	ш	ш	5	Ξ		

POST(18,J) F8.3 G5-72 NOTE: A card of this type is required for each posture Jumber of cards is 18.					Card:	14
MARNED TARGET ELEMENTS POSTURE DATA 1.3 4.5	Card: 14	E H G H A STAN TAN TAN TAN TAN TAN TAN TAN TAN TAN	Description	POST(I,J) = 1.0 for I ≥ 13 indicates that element (I-2) is critical element for posture J NOTE: A card of this type is required for each posture in the scenario. Each card of this type must be preceded by a type 13 card. Maximum number of cards is 18.		
WARNED TARGET ELEMENTS POSTURE DATA 1.2.3 4.5.4 2.6 4 1.4 2 2.4 5 3 1.2.3 4.5.4 2.6 4 1.4 2 2 4 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	4	O carps as salva	Columns	65-72		
MARNED TARGET ELEMENTS POST 1.2.1 4.5 4) 1.6 1.1 4 1.5 1	STURE DATA	C Selector series and series and	Format	F8.3		
I POST(18,J)	LEMENTS POS	B	Units			
I I	NED TARGET EL	-		POST(18,J)		
	WAR		ID	I		

П			Card: 15
Card: 15	66 64 76 77 78 78 77 78 78 80		3)
	A १२३ ६ १ व १ के ११ मानीसामानीकसम्मानस्य स्थानस्य स्थानस्य अधि स्थानीकस्य अधि स्थानीकस्य स्थानस्य स्थ	Description	Number of estimated postures in scenario (NMSN < NESTP as defined on card 3)
	5 27/28 28 30(2) 32 33/34	Columns	1-5
RES	2 SZ P 2 SZ ZZ 12 B2 B481	Format	15
MATED POSTURES	. she ii izin ishe iz	Units	
NUMBER OF ESTIMATED	A 1 2 3 4 5 6 7	Parameter	NMSN
NEW		10	A

					-							16	
Card: 16	A B C D E F G H I J	Description	Desired attack level versus first estimated posture	Desired attack level versus second estimated posture	Desired attack level versus third estimated posture	Desired attack level versus fourth estimated posture	Desired attack level versus fifth estimated posture	Desired attack level versus sixth estimated posture	Desired attack level versus seventh estimated posture	Desired attack level versus eighth estimated posture	Desired attack level versus ninth estimated posture	Desired attack level versus tenth estimated posture	
	D 37/15 14/15 13/15/19	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
	C 18/19 20 21/22 23 24/25 76	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
LEVELS	B spenialistenshen	Units	1	1	1	1	1	1	1	1	1	1	
DESIRED ATTACK LEVELS	A 1 2 3 4 5 6 7 1	Parameter	VOL(1)	VOL(2)	VOL(3)	VOL(4)	VOL (5)	(9) TOA	VOL (7)	(8) 0	(6) NOF	VOL(10)	
DES		ID	А	8	၁	0	ш	ш	5	I	I	r	

								Ca	rd:	17	
Card: 17	A B १ २ ३ ६ १ ० ९ मेगा जो उस अमेस सम्मास समास स	Description	Number of Red battalions in threat	Number of individual Red targets in threat	NOTE: After this card has been read, information with respect to each Red battalion and Red target is entered from Logical File No. 3.						
AT	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Columns	1-5	01-9							
TARGETS IN THREAT	n tapa es sepa es sepa es	Format	15	15							
1 1	3 1 9 ha 11 12 14 15 14 15	Units	1	1							
BATTALIONS AND	A [123]45 41	Parameter	NTBN	NITGTS							
RED		ID	А	8							

		T		Card:	18
Card: 18	00 67 87 77 37 57 57 57 77 78 90		SE		
	A स्थापन सम्बद्धान सम्बद्धान सम्बद्धान सम्बद्धान स्थापन स्थापन स्थापन सम्बद्धान समित्र समित	Description	Number of military worth groupings (current maximum value of 4)		
S	क्षा है। जिस्स हर अद्वीर ह	Columns	1-5		
GROUPING	2 2 1 2 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	Format			
TARY WORTH	e shendunsken	Units			
NUMBER OF MILITARY WORTH GROUPINGS	A 1 2 3 4 5 617	Par	NGRP		
N		ID	А		

П			- 27		,						Card:	19	
6	76 77 78 79 80		One	One	Two	Тwo	Three	Three	Four	Four			
Card: 19	H		No.										
Ca	7 62 68 70		aroup	aroup	aroup	aroup	aroup	aroup	roup	roup			
	General	ion	for (
	5.7 Se 59 60 61 62	Description	limit										
	F sı s2 s3 s 4 ss s 4	De	Military worth upper limit for Group No.	Military worth lower limit for Group No.	Military worth upper limit for Group No.	Military worth lower limit for Group No.	Military worth upper limit for Group No.	Military worth lower limit for Group No.	Military worth upper limit for Group No.	Military worth lower limit for Group No.			
	S46 47 48 49 50		worth										
	40 41 4344 4		itary										
	35 36 27 38 39		Mil	Mi	Mil	Mil	Mil	Mil	Mil	Mil			
	() () () () () () () () () () () () () (Columns	1-10	11-20	21-30	31-40	41-50	21-60	01-19	71-80			
	C 20 22 22 24 20 2 4 20 2	Format	F10.2										
LIMITS	A B C C H Table in the in the in the copplex 22 des as often 22 and 12 a	Units	-	1	1	1	1	1	1	1			
MILITARY WORTH LIMITS	A A 123 4 5 5 1 1	Parameter	GROUP(1,1)	GROUP(2,1)	GROUP(1,2)	GROUP(2,2)	GROUP(1,3)	GROUP (2,3)	GROUP(1,4)	GROUP(2,4)			
MIL		ID	A	В	ပ	0	ш	ш	5	I			

						Card:	20
Card: 20	sector range sur mess		ist	ist, it will re plan sily l for 00,			
	A १३३ ६३ १३३ १४ १ १ १ १ १ १ १ १ १ १ १ १ १ १ १ १	Description	Number of fire plans on target list (current maximum value of 15)	If no fire plans are on target list, it will be necessary to enter a dummy fire plan on cards 20, 21. This can be easily accomplished by reading the value 1 for MFPTM on card 20 and values 1000.00, 9999.00, for TMXFP array on card set 21.			
	A Tribu is subs 12 tabs	Format Columns	1-5				
	ule se electrorates	Format	15				
PLANS	u siprarrikritade s	Units					
NUMBER OF FIRE PLANS	A 123/45/8/7	Pare	NFPTM				
NUM		ID	A				

П											Card:	21a	
Card: 21a	A B C D E F G H I I J	Description	First fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Second fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Third fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Fourth fire plan identification number	
	D 7/12 28 30(2) 32 33(1)	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
	C C C 20 21 22 23 2425 76	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
DATA	B homelande	Units	1	minutes	minutes	-	minutes	minutes	1	minutes	minutes	1	
RE PLAN TIME DATA	A 123/456/70	Parameter	TMXFP(1,1)	TMXFP(2,1)	TMXFP(3,1)	TMXFP(1,2)	TMXFP(2,2)	TMXFP(3,2)	TMXFP(1,3)	TMXFP(2,3)	TMXFP(3,3)	TMXFP(1,4)	
FIRE		ID	A	æ	ပ	0	ш	ш	5	Ξ	I	ŋ	

										Ca	rd:	21ь	
Card: 21b	A B C D E F G H I I I J	u	Time at which fourth fire plan will be force- processed by Division or Corps FDC	Time at which fourth fire plan will be force- processed by battalion FDC	Fifth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Sixth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Seventh fire plan identification number		
	H	Description	fire pla	fire pla on FDC	ificatio	lan will FDC	an will	ificatio	lan will FDC	lan will	entificat		
	8 8 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	De	h fourth Division	h fourth battalio	lan ident	n fire pl or Corps	fire pl	lan ident	n fire pl or Corps	fire pl	plan ide		
	F n dougle a		Time at which fourth fire plan will processed by Division or Corps FDC	Time at which fourth fire processed by battalion FDC	h fire pl	Time at which fire plan by Division or Corps FDC	Time at which fi by battalion FDC	h fire pl	Time at which fire plan oby Division or Corps FDC	Time at which fi by battalion FDC	nth fire		
	E sada a ade		Time	Time	Fift	Time by D	Time by b	Sixt	Time by D	Time by b	Seve		
	ी भ्राम्बारा स्थापना स्थापना	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72		
	C C 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
DATA	B Spenskunshen	Units	minutes	minutes	1	minutes	minutes	1	minutes	minutes	1		
FIRE PLAN TIME DATA	A 1 2 3 4 5 6 7 6	Parameter	TMXFP(2,4)	TMXFP(3,4)	TMXFP(1,5)	TMXFP(2,5)	TMXFP(3,5)	TMXFP(1,6)	TMXFP(2,6)	TMXFP(3,6)	TMXFP(1,7)		
FIRE		ID	A	<u> </u>	2	0	<u></u>	<u>_</u>	5				

							Card:	21Ь	
Card: 21b	A B C D E F G H I I J	Description	Time at which fire plan will be force-processed by Division or Corps FDC	NOTE: This card is required when more than three fire plans have been specified on card type 20. If no fire plans are played, see note on card set 20 description.					
	D sapa sapa	Columns	73-80						
	C 18/19 20 21/22 23 24/25 28	Format	F8.2						
DATA	B shorrigiziaisherr	Units	minutes				-24		
FIRE PLAN TIME DATA	1 2 3 4 5 6 7 8	Parameter	TMXFP(2,7)						
FIR		ID	J						

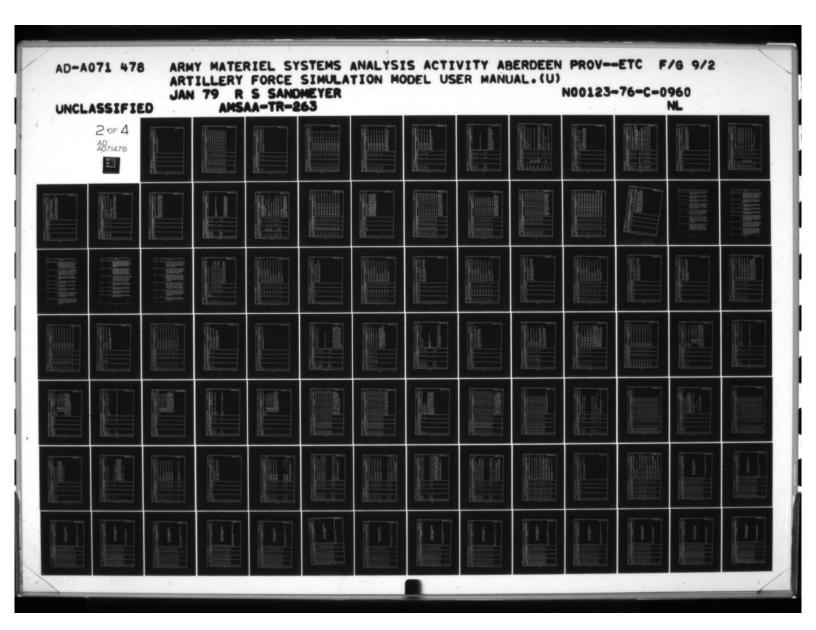
							_				Card:	21c	
Card: 21c	A B C D E F G H I I J	Description	Time at which seventh fire plan will be force- processed by battalion FDC	Eighth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Ninth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	Tenth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC		
	E F		Time at which processed by	Eighth fire p	Time at which fire plan oby Division or Corps FDC	Time at which fin by battalion FDC	Ninth fire pl	Time at which fire plan by Division or Corps FDC	Time at which fi by battalion FDC	Tenth fire pl	Time at which fire plan by Division or Corps FDC		
	D sampa sampa sa	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72		
	C 18/9 70 20/27 23 24/5 24	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
DATA	B Spenialisticity	Units	minutes	-	minutes	minutes	1	minutes	minutes	1	minutes		
FIRE PLAN TIME DATA	A	Parameter	TMXFP(3,7)	TMXFP(1,8)	TMXFP(2,8)	TMXFP(3,8)	TMXFP(1,9)	TMXFP(2,9)	TMXFP(3,9)	TMXFP(1,10)	TMXFP(2,10) minutes		
FIR		ID	A	B	U	۵	ш	щ	5	Ξ	I		

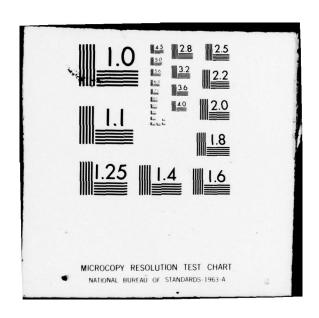
							Card:	21c	
Card: 21c	A B C D E F G H Is a layoun inglase sales as algo as a compares and an approximation of consistence of the sales and an analom and as a compares and an analom and a compares and a com	Description	Time at which fire plan will be force-processed by battalion FDC	NOTE: This card is required when more than six fire plans have been specified on card type 20.					
	D szipe es sapes szipa	Columns	73-80						
	C 10 20 20 20 20 20 20 20 20 20 20 20 20 20	Format	F8.2						
DATA	B spaniaja sajen	Units	minutes						
E PLAN TIME DATA	A 1 2 3 4 5 6/7 1	Parameter	TMXFP(3,10) minutes						
FIRE		ID	C						

er rocessed ressed	Card: 21d
ion numbor force-pr force-pr number orce-proce	-process
Scription Intificat Nwill be fication ill be for fication be forc	ue force
G Plan ide fire plan Corps Fi ire plan ire plan ire plan in identi plan will	
An TIME DATA A A A A A A A A	
Inmus Eleventh firm Time at which fire by Division or Cime at which fire plants in the plants in t	
1-8 1-8 1-8 1-8 1-8 1-8 3-40 11-48 1	
Format C 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1- 1-	
IME DATA Soft a found bushelm	
FIRE PLAN TIME DATA A TWXFP(1,11) B TWXFP(2,11) minutes C TWXFP(3,11) minutes TWXFP(3,12) minutes TWXFP(3,12) minutes TWXFP(3,13) minutes FR TWXFP(3,13) minutes FR TWXFP(3,13) minutes FR TWXFP(3,13) minutes FR	
FIRE PLAN TIME ID Parameter A TMXFP(1,11) B TMXFP(2,11) ID Parameter A TMXFP(2,11) Minutes TMXFP(3,12) TMXFP(3,12) TMXFP(3,13) TMXFP(3,13) TMXFP(3,13) TMXFP(3,13) TMXFP(3,13) TMXFP(3,13)	\dashv
3-56	

						Card:	21d
Card: 21d	A B C D E F G H I I J	Description	Fourteenth fire plan identification number	NOTE: This card is required when more than 10 fire plans have been specified on card type 20.			
	D 27pm 23 sept 22 sept 2	Columns	73-80				
	C 18/9 20 21/22 23 2425 26	Format	F8.2				
DATA	B spenialisteisher	Units	1				
FIRE PLAN TIME DATA	A 1 2 3 4 5 6 7 9	Parameter	TMXFP(1,14)				
FIR		ID	ŋ				

П		1							Card: 21e
Card: 21e	A B C D E E TO 19 po 11 replacementation produces and procession and encountry of the second	Description	Time at which fourteenth fire plan will be force- processed by Division or Ccrps FDC	Time at which fourteenth fire plan will be force- processed by battalion FDC	Fifteenth fire plan identification number	Time at which fire plan will be force-processed by Division or Corps FDC	Time at which fire plan will be force-processed by battalion FDC	NOTE: This card is required when more than 13 but not more than 15 fire plans have been specified on card type 20.	
) E	Columns	1-8 T	9-16 T	17-24 F	25-32 T	33-40 T	Z - S	
	3.78.27/28	ပ္ပ		-6		52	33		
	C seps on reference	Format	F8.2	F8.2	F8.2	F8.2	F8.2		
DATA	B sharingia ishen	Units	minutes	minutes	1	minutes	minutes		
PLAN TIME	A 12345671	Parameter	TMXFP(2,14)	TMXFP(3,14)	TMXFP(1,15)	TMXFP(2,15)	TMXFP(3,15)		
FIRE		ID	А	В	၁	0	ш		





	T				Card: 22
00.19	Card: 22	+++ com ran 12 12 12 13 19 19 10		ams	
		A १०३ ६३ <u>६० व क्रमाम् माम्प्रमाम् माम्प्रमास्य स्वतित्र स्त्रोतस्य मित्र अस्त्र अस्त्र अस्त्र स्वति स्वति स्वति अस्त्र माम्प्रमास्य स्वति स्वति</u>	Description	Number of enemy communications jams (current maximum value of 5)	
		KE 27 (CR. 82 92/13 8	Columns	1-5	
2010	JAMS	t cape to tales to tales ?	Format		
010111011	NICAL IONS	. spen zhruchen	Units		
10 01	NUMBER OF COMMUNICATIONS JAMS	1 2 3 4 5 67	Parameter	NZAP	
	S		ID	4	

													Card:	23	
Card: 23	A B C D E F G H I J	Description	Start time of first enemy communications jam	Stop time of first enemy communications jam	Start time of second enemy communications jam	Stop time of second enemy communications jam	Start time of third enemy communications jam	Stop time of third enemy communications jam	Start time of fourth enemy communications jam	enemy communications jam	Start time of fifth enemy communications jam	Stop time of fifth enemy communications jam			
	G इस डब्स्ट्रिक अपूर्णना योग सर्वाद सम्बद्ध अपूरु अपूरु अ	De	Start time of first e	Stop time of first er	Start time of second	Stop time of second e	Start time of third e	Stop time of third er	Start time of fourth	Stop time of fourth enemy communications	Start time of fifth e	Stop time of fifth er			
	D Szips za sapi zaza	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80			
	C 10 19 20 23 22 23 2425 2	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2			
JAM TIMES	B shenighmenten	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
COMMUNICATIONS JAM	A 1 2 3 4 5 6 7	Parameter	EW(1,1)	EW(2,1)	EW(1,2)	EW(2,2)	EW(1,3)	EW(2,3)	EW(1,4)	EW(2,4)	EW(1,5)	EW(2,5)			
3		ΩI	V	8	ပ	0	ш	ш	9	Ŧ	П	2			

				S	Card: 24
Card: 24	Mer un enfro. 72 22 22 25 78 77 20 90		Le Weapon systems cimum value of 20)	systems played in 🛨	
	सर्था राज्य प्रत्याची र प्रकृतिक मोकश्चर्याच । क्रीव स्टब्स्ट स्टब्स स्टब्स्ट स्टब्स स्टब्स्ट स्टब्स स्टब्स स्टब्स्ट स्टब्स्ट स्टब्स्ट स्टब्स्ट स्टब्स स्ट	Description	Number of different Red and Blue weapon systems in input data deck (current maximum value of 20)	Number of different Red weapon systems played in this run of the program	
	क्राया प्रसामा क्रायं	Columns	1-5	6-10	
WEAPON SYSTEMS	upanimanim	Format	15	15	
1 -	~ ·	Units		1	
NUMBER OF DIFFERENT	A	Parameter	NSYS	NSYSE	
NUN		ID	А	8	

									T	Card:	25a	
Card: 25a	A B C D E F G H I J K L M N O P	Description	Flag for first weapon system = (1. used; =0, do not use)	Flag for second weapon system = (1. used; =0, do not use)	Flag for third weapon system = (1. used; =0, do not use)	Flag for fourth weapon system = (1. used; =0, do not use)	<pre>Flag for fifth weapon system = (1. used; =0, do not use)</pre>	Flag for sixth weapon system = (1. used; =0, do not use)	Flag for seventh weapon system = (1. used; =0, do not use)	Flag for eighth weapon system = (1. used; =0, do not use)	Flag for ninth weapon system = (1. used; =0, do not use)	Flag for tenth weapon system = (1. used; =0, do not use)
	F G	Columns	1-5	01-9	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50
	eles zapajaz za zepszez	Format	15	15	15	15	. IS	15	15	15	15	15
SELECTION	C D	Units	I	1	ı	ı	1	1	1	1	1	-
WEAPON SYSTEMS SELECTION	A B	Parameter	KSIG(1)	KSIG(2)	KSIG(3)	KSIG(4)	KSIG(5)	KSIG(6)	KSIG(7)	KSIG(8)	KSIG(9)	KSIG(10)
WEA		ID	4	8	ပ	٥	ш	ш	9	Ξ	н	ŋ

									Card:	25a
Card: 25a	A B C D E F G H I J K L M N O P	Description	Flag for eleventh weapon system (=1. used; =0, do not use)	Flag for twelfth weapon system (=1. used; =0, do not use)	Flag for thirteenth weapon system (=1. used; =0, do not use)	Flag for fourteenth weapon system (=1. used; =0, do not use)	Flag for fifteenth weapon system (=1. used; =0, do not use)	Flag for sixteenth weapon system (=1. used; =0, do not use)	NOTE: Current dimensions of some system data arrays require that not more than 11 of the KSIG values be equal to 1. The first N systems must be Blue; the next NSYS-N systems must be Red.	
	F G	Columns	51-55	9-99	61-65	02-99	71-75	76-80		
	D E	Format	15	15	15	15	15	. 51		
SELECTION	C C C	Units	-	ŀ	1	1		1		
WEAPON SYSTEMS SELECTION	A 1	Parameter	KSIG(11)	KSIG(12)	KSIG(13)	KSIG(14)	KSIG(15)	KSIG(16)		
WEA		ID	×	_	Σ	z	0	۵		

	SELECTIC				Card: 25b
1 2 34 5 67 8 9 00 m	-	C C I I I I I I I I I I I I I I I I I I) 149 20 20 20 20 20 20 20 20 20 20 20 20 20	The same series	ে । যোগ দাস্ক চাৰ্ক সমূহ <u>সম্ভিত্ৰ স্থিত কৰি</u> ত সূচ্য সমূহ সমূহ সমূহ সমূহ সমূহ সমূহ সমূহ সমূহ
Parameter Un	5	Units	Format	Columns	Description
KSIG(17)	•		15	1-5	Flag for seventeenth weapon system (=1. used; =0, do not use)
KSIG(18)			15	9-10	Flag for eighteenth weapon system (=1. used; =0, do not use)
KSIG(19)	i		15	11-15	Flag for nineteenth weapon system (=1. used; =0, do not use)
KSIG(20)	i	1	15	16-20	Flag for twentieth weapon system (=1. used; =C, do not use)
					NOTE: This card required when more than 16 but not more than 20 weapon systems have been specified on card type 24.
					Card:
					25b
		1			

		П					-				Cand: 26a
Card: 26a	DEFFGH IN OPP	Description					Alphanumeric weapon system title				NOTE: A card of this type is required for each different weapon system in the input data deck. Maximum number of cards of this type is 20. Each one of these cards must be followed by card types 26b, 26c, 26d, and 26e, in that order (one of each type).
	F G	Columns	1-5	01-9	11-15				71-75	08-92	
	D E	Format	A5	A5	A5				A5	A5	
ITLE	C, shejingiamasien	Units	1	1	1				!	1	
WEAPON SYSTEM TITLE	A B C	Parameter	SRDIX(1)	SRDIX(2)	SRDIX(3)	•	•	•	SRDIX(15)	SRDIX(16)	
WEA		ID	ď	В	ပ				0	۵	

Parameter Units Format Columns SYSID(1) F8.2 1-8 Identification number for ith system (xx.1 = t xx.2 = self-propelled unarmored; xx.3 = self-propelled unarmore	Lard: 26b
Units Format Columns F8.2 1-8 F8.2 9-16 rounds F8.2 17-24 per minute rounds F8.2 25-32 per tube per tub	F I J I J A A A B A B A B B B B B B B B B B B B
rounds F8.2 1-8 rounds F8.2 9-16 rounds F8.2 25-32 per minute rounds F8.2 25-32 per minute rounds F8.2 41-48	Description
rounds F8.2 9-16 minute rounds F8.2 17-24 minute rounds F8.2 25-32 minute rounds F8.2 33-40 per tube per tube per hour T8.2 41-48 T8.10- F8.2 49-56 meters	Identification number for i th system (xx.l = towed; xx.2 = self-propelled unarmored; xx.3 = self- propelled armored)
rounds F8.2 17-24 minute rounds F8.2 25-32 per minute rounds F8.2 33-40 per tube per tube per hour 1) kilo- meters F8.2 41-48 meters	Number of tubes or launchers per fire unit for ith system
rounds F8.2 25-32 per minute rounds F8.2 33-40 per tube per tube F8.2 41-48 F8.2 49-56 meters	Static rate of fire per tube for i th system
rounds F8.2 33-40 per tube per hour F8.2 41-48 kilo- F8.2 49-56 meters	Dynamic rate of fire per tube for i th system
F8.2 41-48 kilo- F8.2 49-56 meters	Maximum number of rounds per tube per hour for ith system (for Red systems, this is the number of tubes per launcher; i.e., I for cannon, 40 for 122-mm MRL, etc.)
kilo- F8.2 49-56 meters	Weapon system type (1.0 = cannon; 2.0 = guided missile; = 3.0, multiple rocket launcher)
	Maximum range of i th system
AXVOL(I) F8.2 57-64 Maximu for it	Maximum number of volleys per mission per battery for i th system

							Card:	26b
Card: 26b	A B C D E F G H I I J	Description	Time between fire missions for i th system	Number of rounds in basic load per battery for i th system.	NOTE: Maximum number of cards of this type is 20. Each card of this type must be preceded by a type 26a card, and followed by card type 26c, 26d, and 26e in that order (one of each type).			
	D szipe ze sebi szape s	Columns	65-72	73-80				
	C 14	Format	F8.2	F8.2				
4TA	B sherrapre ishen	Units	minutes	1				
WEAPON SYSTEM DATA	A 123/456/78	Parameter	TBM(I)	SBLD(I)				
WEA		ID	I	r				

			tem		ared			5			Card	26c	_
ي	11 18 13 18		Battery resupply rate in rounds per hour for i th system	fire	Ratio of volleys per battery for ith system compared to a base system (155-mm is base system); For Red force, this gives number of 122-mm HE rounds equivalent to one of this system's rounds		ittery	Short-term time to repair a failure due to firing	Long-term time to repair a failure due to firing	Short-term time to repair a failure due to moving	Long-term time to repair a failure due to moving		
Card: 26c	RHER		r for	y on a	systetem); E rour	5	for baystem	due to	ue to	due to	ue to		
Š	- 1		er hou	batter	or ith se sys 2-mm H em's r	h syst	ttery ith s	ilure	lure d	ilure	lure d		
	H ada er espes	Description	spuno	m ber	is based of 12, system	or it	er ba	a fa	a fai	a fa	a fai		
	N September 2	Descri	e in r	olleys	r batt 55-mm umber f this	lans 1	ubes pailab	repai	epair	repai	epair		
	6888888		oly rat	Maximum number of volleys per battery on a fire plan target for i th system	Ratio of volleys per battery for ith system to a base system (155-mm is base system); Fr force, this gives number of 122-mm HE rounds equivalent to one of this system's rounds	Time between fire plans for i th system	Minimum number of t <mark>ubes per battery for battery</mark> to be considered available for ith system	me to	e to r	ne to	e to r		
	F u especia		resupp	numbe get f	volles systems of the	ween	numbe	erm ti	m tim	erm ti	m tim		
	अवस्था स्रोत		ttery	ximum an tar	tio of a bas rce, t uivale	me bet	nimum be co	ort-te	ng-ter	ort-te	ng-ter		
	E the section is		Ba	& ⊆	fo to	Ë	유교	<u>ਨ</u>	<u> </u>	<u>ج</u>	<u> </u>		
	D sz repe za sapra za	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72		
	A B C D E F G H I I I J	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
	B uppresperve	Units	!		1	minutes		hours	hours	hours	hours		
DATA	1 0 0 1	'n	-			Ē		2	2	2	2		
WEAPON SYSTEM DATA	A 1 2 3 4 5 6	Parameter	SRSPY(I)	FPVOL(I)	FPRAT(I)	TBFPM(I)	TUBMIN(I)	TRFFS(I)	TRFFL(I)	TRFMS(I)	TRFML(I)		
APON			SRS	FPV(TBF	TUB	TRF	TRF	TRF	TRF		
¥		ID	A	ω	ပ	0	ш	ш	5	Ξ	н		

		T				Card:	26c
Card: 26c	A B C D E F G H I I J	Description	Short-term time to repair a failure due to enemy attrition	NOTE: Maximum number of cards of this type is 20. Each card of this type must be preceded by card types 26a and 26b and followed by card types 26d and 26e in that order (one of each type).			
	D strate 23 steps 35 35	Columns	73-80				
	C	Format	F8.2				
DATA	B shenigisieishen	Units	hours				
WEAPON SYSTEM DATA	A 1 2 3/4 5 6/7 0	Parameter	TRFAS(I)				
WE		ΙD	ŋ				

ō	WEAPON SYSTEM DATA	ATA			Card: 26d
	A B	0 =	C	O szeke es septe az szeke az	C D E F G H I I J
Pa	Parameter	Units	Format	Columns	Description
F	TRFAL(I)	hours	F8.2	1-8	Long-term time to repair a failure due to enemy attrition
8	RBFS(I)		F8.2	9-16	Number of rounds between short-term failures
8	RBFL(I)	-	F8.2	17-24	Number of rounds between long-term failures
8	RBFP(I)	1	F8.2	25-32	Number of rounds between permanent failures
	DBFS(I)	kilo- meters	F8.2	33-40	Distance traveled between short-term failures
ā	DBFL(I)	kilo- meters	F8.2	41-48	Distance traveled between long-term failures
	DBFP(I)	kilo- meters	F8.2	49-56	Distance traveled between permanent failures
ш	ETCT(1)	hours	F8.2	57-64	Expected time to change tube when tube life is exceeded
F	TUBLIF(1)	!	F8.2	65-72	Tube life in number of rounds fired
					26d

				Card:	26d
Card: 26d	A B C D E F G H I I J	Description	Fractional tube damage enemy counterfire (five battalion volleys of a weighted ammo mix) would inflict on a Blue battery having this system NOTE: Maximum number of cards of this type is 20. Each card of this type must be preceded by card types 26a, 26b, and 26c, and followed by card types 26e, in that order (one of each type).		
	D sapers	Columns	73-80		
	C C 22 22 22 22 22 22 22 22 22 22 22 22 22	Format	F8.3		
ATA	B 1 sho 11 squarshe)7	Units			
WEAPON SYSTEM DATA	A 1 2 3 4 5 6/7 6	Parameter	TOTATR(I)		
WEA		ID	C		

							Card:	26e
Card: 26e	A SE	ion	that would be short-	that would be long-term	that would be	Maximum number of cards of this type is 20. and of this type must be preceded by card 26a, 26b, 26c, and 26d, in that order (one type).		
	A B C	Description	Fraction of TOTATR(I) value that would be short-term tube damage	Fraction of TOTATR(I) value that would be long-term tube damage	Fraction of TOTATR(I) value that would be permanent tube damage	NOTE: Maximum number of cards of this type is 20 Each card of this type must be preceded by card types 26a, 26b, 26c, and 26d, in that order (one of each type).		
	स्वक्रमा स्वक्रमा स्वक्रमा । स्वक्रमा स्वक्रमा स्वक्रमा ।	Columns	1-8	9-16	17-24			
	C.	Format	F8.3	F8.3	F8.3			
ATA	B spenulismusten	Units	1	1	1			
WEAPON SYSTEM DATA	A 123/454/7	Parameter	CBDAMS(I)	CBDAML(I)	CBDAMP(I)			
WEA		ID	A	8	ပ			

Card: 27 Number of round types to be read from punched cards NOTE: Current maximum number of rounds used by the systems, keyed in by KSIG array in Subroutine SYSTEM, is 25. There may be an unlimited number of different rounds in the input deck, as long as not more than 25 are used in any one force mix.	
Card: 27 Columns Number of round types to be read from punched cards Number of round types to be read from punched cards NOTE: Current maximum number of rounds used by the systems, keyed in by KSIG array in Subrouti SYSTEM, is 25. There may be an unlimited number of different rounds in the input deck, as long as not more than 25 are used in any one force may be a continued on the continued of the cont	
Columns 1-5	
Format I5	
Units	
NUMBER OF ROUND TYPES A 1 1 1 1 1 1 1 1 1	
A A I D	

				_								Card:	28	
Card: 28	D E F G H I J K L M N O P nerrodes and paragraph and provided and outsides and paragraph and paragra	Description				Alphanimeric round name and weapon system	identification				NOTE: The number of cards required is based on the value of NRS as entered on card type 27 (maximum value of 25). Each card of this type must be followed by a type 29 card.			
ATION	F G	Columns	1-5	6-10	11-15		·	•	71-75	76-80				
DENTIFIC	D E	Format	A5	A5	A5	•		•	A5	A5				
N SYSTEM	Спания	Units		1	1	•			1	1				
ROUND AND WEAPON SYSTEM IDENTIFICATION	A B	Par	SRDIX(1)	SRDIX(2)	SRDIX(3)	•	•		SRDIX(15)	SRDIX(16)				
8		ID	A	В	ပ	•	•	٠	0	۵				

											Card:	29
Card: 29	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Round caliber ID number for ith round type in a particular system (SYSID(IS) < RNDID(I) < 100 + SYSID(IS) in order that round I be included for use with system IS)	Crated unit weight for ith round type	Cost pe r round in thousands of dollars for i th round type	Maximum range of i th round type	In-flight reliability of i th round type	Type of round (1.0 = ICM; $2.0 = HE$; $3.0 = CLGP$)	Basic load per battery for ith round type	Resupply rate per battery for i th round type	Estim ated radius of effects per battery volley for i th round type	NOTE: The number of cards required is based on the value of NRS as entered on card type 27. Each card of this type must be preceded by a type 28 card. Maximum number of cards of this type is 25.
	D szips zs subs szszba	Format Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	
PES)	C 18 18 20 21 22 23 2425 21	Format	F8.2	F8.2	F8.2	F8-2	F8.2	F8.2	F8.2	F8.2	F8.2	
TON (ALL TY	B she ii izlis ia izlieli	Units		metric tons	kilo- dollars	kilo- meters	1	1	rounds	rounds per hr	meters	
ROUND INFORMATION (ALL TYPES)	A 1 2 3 4 5 67 1	Parameter	RND ID (I)	WGT(I)	CST(I)	RMX (I)	REL(I)	RTP(I)	BLD(I)	RGPY(I)	RDAM(I)	
8		ID	A 8	ပ	٥	ш	LL	9	王	-		**

										Card:	30a	
Card: 30a	C D E F G H I I I J	Description	First range value for range versus error and EFC tables for i th round type	Second range value for range versus error and EFC tables for ith round type	Third range value for range versus error and EFC tables for ith round type	Fourth range value for range versus error and EFC tables for i th round type	Fifth range value for range versus error and EFC tables for ith round type	Sixth range value for range versus error and EFC tables for ith round type	Seventh range value for range versus error and EFC tables for ith round type	Eighth range value for range versus error and EFC tables for ith round type	Ninth range value for range versus error and EFC tables for ith round type	
ES)	D supera maps supper	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	65-72	
ICM AND HE TYPES)	C wharizates	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
	B spenglanghen	Units	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	
ROUND INFORMATION (A B 1 2 3 4 5 6 7 0 9 10 11 12	Parameter	RG(I,1)	RG(1,2)	RG(I,3)	RG(1,4)	RG(I,5)	RG(I,6)	RG(1,7)	RG(1,8)	RG(1,9)	
ROL		ID	A	8	ပ	0	ш	ш.	5	Ξ	П	

	Card: 30a
NFORMATION (ICM AND HE TYPES) A B C D E F G H I J J Isabi a specified ICM and HE TYPES) Reters A B C D E F G H I J J Description Tenth range value for range versus error and EFC tables for ith round type NOTE: The number of cards required is based on the number of card type 29 that have specified ICM or HE rounds. Each card of this	type must be preceded by a type 28 and type 29 card, in that order. It is not required that all 10 ranges be used; however, the range values must be in ascending order, with the last range value equal to the maximum range of the round.
25) D D D D D D D D D D D D D D D D D D D	
VD HE TYPES) C Format C F8.2	
ION (ICM AND HE B C shariquangeruhamata Units Form Kilo- F8.2 meters	
ROUND INFORMATION A 1.2.3(1.1) D Parameter J RG(I,10) ki	
ROU J	

						-							Card: 30b
Card: 30b	A B C D E F G H I D E 19 19 19 19 19 19 19 19 19 19 19 19 19	Description	Round-to-round error at first range value (CPE)	Round-to-round error at second range value (CPE)	Round-to-round error at third range value (CPE)	Round-to-round error at fourth range value (CPE)	Round-to-round error at fifth range value (CPE)	Round-to-round error at sixth range value (CPE)	Round-to-round error at seventh range value (CPE)	Round-to-round error at eighth range value (CPE)	Round-to-round error at ninth range value (CPE)	Round-to-round error at tenth range value (CPE)	NOTE: The number of cards required is based on the number of cards of card type 29 that have specified ICM or HE rounds. Each card of this type must be preceded by a type 28, type 29, and type 30a card, in that order.
(S)	ी प्रमाण अस्ति स्थापित	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
ICM AND HE TYPES)	C who and a cooper	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
1	B spenglangen	Units	meters	meters	meters	meters	meters	meters	meters	meters	meters	meters	
ROUND INFORMATION	A 1 2 3 4 5 67	Parameter	CPR(I,1)	CPR(1,2)	CPR(1,3)	CPR(1,4)	CPR(1,5)	CPR(I,6)	CPR(1,7)	CPR(1,8)	CPR(1,9)	CPR(1,10)	
100 100 100 100 100 100 100 100 100 100		ID	A	В	ပ	0	ш	щ	5	Ξ	П	J	

													Card: 30c
Card: 30C	1.2.3 of s. 6 jo ben information into marker marker may make to make an elementation elementation in the marker make in the section of the section in the marker make in the section in the marker make in the section i	Description	Total system error at first range value	second range value	system error at third range value	system error at fourth range value	system error at fifth range value	Total system error at sixth range value	system error at seventh range value	Total system error at eighth range value	Total system error at ninth range value	Total system error at tenth range value	NOTE: The number of cards required is based on the number of cards of card type 29 that have specified ICM or HE rounds. Each card of this type must be preceded by a type 28, type 29, type 30a, and type 30b card, in that order.
	5 5	crip	fir	sec :	thi	fou	fif	six:	sev	eig:	nin	ten	card ound ound by
10	6 8 8 8 8 8 8 8 8 8	Des	ı error at	system error at	error at	error at	error at	error at	error at	error at	error at	error at	NOTE: The number of cards rethe number of cards of cards specified ICM or HE rounds. type must be preceded by a type 30a, and type 30b card,
	F		ystem	ystem	ystem	ysten	ystem	ystem	ystem	ystem	ystem	ystem	The rober of the control of the cont
			s le:					al s	als	al s	al s	al s	E: cifi e mu
	ME TO ME		Tot	Total	Total	Total	Total	Tot	Total	Tot	Tot	Tot	NOTE: the n speci type type
(S:	ी अस्ति कर अवीत क्षांत्रिक कर	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
(ICM AND HE TYPES)	C 222 22 22 22 22 22 22 22 22 22 22 22 2	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
	B Bengin	Units	meters	meters	meters	meters	meters	meters	meters	meters	meters	meters	
ROUND INFORMATION	1 2 3 4 5 61 1	Parameter	(1,1)	CPS(1,2)	CPS(1,3)	CPS(1,4)	CPS(1,5)	(PS(I,6)	CPS(1,7)	CPS(1,8)	(PS(I,9)	CPS(1,10)	
ROL		ID	A	B	ပ	٥	ш	ш	9	Ŧ	П	7	

1.1/1.4 B B C C C C C C C														Card: 30d
UND INFORMATION (1.1, A sq. 1.1 B 1.1, A sq. 1.1 bm un CHG(I,1)		. F	Description	Equivalent full charge value at first range value	Equivalent full charge value at second range value	Equivalent full charge value at third range value	Equivalent full charge value at fourth range value	Equivalent full charge value at fifth range value	Equivalent full charge value at sixth range value	Equivalent full charge value at seventh range value	Equivalent full charge value at eighth range value	Equivalent full charge value at ninth range value	Equivalent full charge value at tenth range value	
UND INFORMATION (1.1, A sq. 1.1 B 1.1, A sq. 1.1 bm un CHG(I,1)	(S3	ि स्थानिक स्थानिक स्थानिक स	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
UND INFORMATION (1.1, A sq. 1.1 B 1.1, A sq. 1.1 bm un CHG(I,1)	ND HE TYPE	C mes na repara seps n	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
CHG		B spensten	Units		!	1	1	1	ŀ	1	1	1	1	
L I H G F F D C B A ID	IND INFORMAT	1 2 3 4 5 67	Parameter	СНG(1,1)	CHG(1,2)	СНG(1,3)	CHG(I,4)	СНG(1,5)	СНG(1,6)	СНG(1,7)	СНG(1,8)	СНG(1,9)	СНG(1,10)	
	8		ID	A	8	ပ	0	ш	ш	9	=	Н	2	

										Card:	31	
Card: 31	C D E F G H I I J	ion	area per round versus standing personnel at first range value in an open environment	area per round versus standing personnel at second range value in an open environment	area per round versus standing personnel at third range value in an open environment	area per round versus standing personnel at fourth range value in an open environment	Lethal area per round versus standing personnel target at fifth range value in an open environment	area per round versus standing personnel at sixth range value in an open environment	Lethal area per round versus standing personnel target at seventh range value in an open environment	Lethal area per round versus standing personnel target at eighth range value in an open environment	Lethal area per round versus standing personnel target at ninth range value in an open environment	
	T Ses	Description	versus value	versus	versus value	versus	versus value	versus value	versus e valu	versus	versus value	
	6 8 3 4 2 3 3 4 2 3	De	er round	er round	er round	er round	er round th range	er round th range	er round	er round hth range	er round th range	
	F		area pe at firs	area pe at secc	area pe at thin	area pe at four	area pe at fifi	area pe at sixt	area pe at seve	area pe at eigh	area pe at nin1	
	E saprae sapere		Lethal target	Lethal target	Lethal target	Lethal target	Lethal target	Lethal target	Lethal target	Lethal target	Lethal	
	D 8 27/20 23 30(3) 12 (33)44	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	
	C	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
HE ONLY)	B shenialistetshehr	Units	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	
LETHAL AREAS (HE ONLY)	A B	Parameter	AL(1)	AL(2)	AL(3)	AL(4)	AL(5)	AL(6)	AL(7)	AL(8)	AL (9)	
LET		ID	A	8	ပ	0	ш	L	5	I	н	

LETHAL AREAS (HE ONLY) Lethal area Lethal area per round versus standing personnel card type 29, either 9, 18, 27, or 36 cards of that may be required. These cards must be type 30d card. These cards must be type 30d cards. These cards must be type 30d cards.	Card: 31
3-82	

TABLE 3-11. Lethal Area Data Cards for HE Rounds (Card Type 31).

	-	
1	AL(J), J = 1, 10	Lethal area per round versus personnel standing target at 10 range values for an open environment
2	AL(J), J = 11, 20	Lethal area per round versus personnel prone target at 10 range values for an open environment
3	AL(J), J = 21, 30	Lethal area per round versus personnel crouching target at 10 range values for an open environment
4	AL(J), J = 31, 40	Lethal area per round versus tank target at 10 range values for an open environment; for Red rounds, the lethal area per round versus whatever Blue 105-mm system is played at 10 range values in an open environment
5	AL(J), J = 41, 50	Lethal area per round versus APC target at 10 range values for an open environ- ment; for Red rounds, the lethal area per round versus whatever Blue towed 155-mm system is played at 10 range values in an open environment
6	AL(J), J = 51, 60	Lethal area per round versus truck target at 10 range values for an open environment; for Red rounds, the lethal area per round versus whatever Blue self-propelled, armored 155-mm system is played at 10 range values in an open environment
7	AL(J), J = 61, 70	Lethal area per round versus artillery tube target at 10 range values for an open environment; for Red rounds, the lethal area per round versus a Blue self-propelled, unarmored 8-inch or 175-mm system (whichever is played) at 10 range values in an open environment

TABLE 3-11. Lethal Area Data Cards for HE Rounds (Card Type 31)
-- Contd.

		conta.
8.	AL(J), J = 71, 80	Lethal area per round versus radar target at 10 range values for an open environ- ment; for Red rounds, the lethal area per round versus a Blue missile or rocket launcher (whichever is played) at 10 range values in an open environment
9.	AL(J), J = 81, 90	Lethal area per round versus missile launcher target at 10 range values for an open environment; leave blank for Red rounds
10.	AL(J), $J = 91$, 100	Lethal area per round versus personnel standing target at 10 range values for a wooded environment
11.	AL(J), J = 101, 110	Lethal area per round versus personnel prone target at 10 range values for a wooded environment
12.	AL(J), J = 111, 120	Lethal area per round versus personnel crouching target at 10 range values for a wooded environment
13.	AL(J), J = 121, 130	Lethal area per round versus tank target at 10 range values for a wooded environment; for Red rounds, the lethal area per round versus whatever Blue 105-mm system is played at 10 range values in a wooded environment
14.	AL(J), J = 131, 140	Lethal area per round versus APC target at 10 range values for a wooded environment; for Red rounds, the lethal area per round versus whatever Blue towed 155-mm system is played at 10 range values in a wooded environment
15.	AL(J), J = 141, 150	Lethal area per round versus truck target at 10 range values for a wooded environment; for Red rounds, the lethal area per round versus whatever Blue self-propelled, armored 155-mm system is played at 10 range values in a wooded environment

TABLE 3-11. Lethal Area Data Cards for HE Rounds (Card Type 31)
-- Contd.

16.	AL(J), J = 151, 160	Lethal area per round versus artillery tube target at 10 range values for a wooded environment; for Red rounds, the lethal area per round versus a Blue self-propelled, unarmored 8-inch or 175-mm system (whichever is played) at 10 range values in a wooded environment
17.	AL(J), J = 161, 170	Lethal area per round versus radar target at 10 range values for a wooded environment; for Red rounds, the lethal area per round versus a Blue missile or rocket launcher (whichever is played) at 10 range values in a wooded environment
18.	AL(J), J = 171, 180	Lethal area per round versus missile launcher target at 10 range values for a wooded environment; leave blank for Red rounds
19.	AL(J), J = 181, 190	Lethal area per round versus personnel standing target at 10 range values for a town environment
20.	AL(J), J = 191, 200	Lethal area per round versus personnel prone target at 10 range values for a town environment
21.	AL(J), J = 201, 210	Lethal area per round versus personnel crouching target at 10 range values for a town environment
22.	AL(J), J = 211, 220	Lethal area per round versus tank target at 10 range values for a town environment; for Red rounds, the lethal area per round versus whatever Blue 105-mm system is played at 10 range values in a town environment
23.	AL(J), J = 221, 230	Lethal area per round versus APC target at 10 range values for a town environment; for Red rounds, the lethal area per round versus whatever Blue towed 155-mm system is played at 10 range values in a town environment

TABLE 3-11. Lethal Area Data Cards for HE Rounds (Card Type 31)
-- Contd.

-		0011041
24.	AL(J), J = 231, 240	Lethal area per round versus truck target at 10 range values for a town environment; for Red rounds, the lethal area per round versus whatever Blue self-propelled, armored 155-mm system is played at 10 range values in a town environment
25.	AL(J), J = 241, 250	Lethal area per round versus artillery tube target at 10 range values for a town environment; for Red rounds, the lethal area per round versus a Blue self-propelled, unarmored 8-inch or 175-mm system (whichever is played) at 10 range values in a town environment
26.	AL(J), J = 251, 260	Lethal area per round versus radar target at 10 range values for a town environment; for Red rounds, the lethal area per round versus a Blue missile or rocket launcher (whichever is played) at 10 range values in a town environment
27.	AL(J), J = 261, 270	Lethal area per round versus missile launcher target at 10 range values for a town environment; leave blank for Red rounds
28.	AL(J), J = 271, 280	Lethal area per round versus personnel standing target at 10 range values for a grassy environment
29.	AL(J), J = 281, 290	Lethal area per round versus personnel prone target at 10 range values for a grassy environment
30.	AL(J), J = 291, 300	Lethal area per round versus personnel crouching target at 10 range values for a grassy environment

TABLE 3-11. Lethal Area Data Cards for HE Rounds (Card Type 31)
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31.	AL(J), J = 301, 310	Lethal area per round versus tank target at 10 range values for a grassy environ- ment; for Red rounds, the lethal area per round versus whatever Blue 105-mm system is played at 10 range values in a grassy environment
32.	AL(J), J = 311, 320	Lethal area per round versus APC target at 10 range values for a grassy environment; for Red rounds, the lethal area per round versus whatever Blue towed 155-mm system is played at 10 range values in a grassy environment
33.	AL(J), J = 321, 330	Lethal area per round versus truck target at 10 range values for a grassy environment; for Red rounds, the lethal area per round versus whatever Blue self-propelled, armored 155-mm system is played at 10 range values in a grassy environment
34.	AL(J), J = 331, 340	Lethal area per round versus artillery tube target at 10 range values for a grassy environment; for Red rounds, the lethal area per round versus a Blue self-propelled, unarmored 8-inch or 175-mm system (whichever is played) at 10 range values in a grassy environment
35.	AL(J), J = 341, 350	Lethal area per round versus radar target at 10 range values for a grassy environment; for Red rounds, the lethal area per round versus a Blue missile or rocket launcher (whichever is played) at 10 range values in a grassy environment
36.	AL(J), J = 351, 360	Lethal area per round versus missile launcher target at 10 range values for a grassy environment; leave blank for Red rounds

											Card:	32
Card: 32	A B C D E F G G Spennighen nepenandere schools school scho	Description	Slope for radius of effects plot	y-intercept of radius of effects plot	Submissile reliability in an open environment	Submissile reliability in a wooded environment	Submissile reliability in a town environment	Submissile reliability in a grassy environment	Number of submissiles per round	NOTE: Each time an ICM round is specified on card type 29, a card of this type is required. It must be preceded by a type 30d card.		
	D எண்ணக்கள்	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56		÷	
	C Heartzraces	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2			
	B spendawanen	Units	meters per kilo- meters	meters	1	1	1	1	1			
ICM ROUND DATA	A 1 2 3 4 5 6/7	Parameter	SRE	REZ	SRO	SRW	SRT	SRG	EN			
IC		ID	A	В	ပ	0	ш	ш.	9			

									<u>t</u>	Card:	33
Card: 33	A B C D E F G H I I I I I I I I I I I I I I I I I I		area per submissile for standing personnel in an open environment	area per submissile for prone personnel in an open environment	area per submissile for crouching personnel in an open environment	Lethal area per submissile for tank target in an open environment	Lethal area per submissile for APC target in an open environment	Lethal area per submissile for truck target in an open environment	Lethal area per submissile for artillery tube target in an open environment	Lethal area per submissile for radar target in an open environment	
	H Ss sajaysa sa eder ez esfedes ed	Description	omissile for environment	omissile for environment	omissile for environment	omissile for	omissile for	omissile for	omissile for nent	omissile for	
	F G 44 44 44 59 51 52 53 54		area per submissile fo in an open environment		area per submissile fo in an open environment	Lethal area per sub open environment	Lethal area per sub open environment	Lethal area per sub open environment	Lethal area per submis in an open environment	Lethal area per sub open environment	
	हि अस्त्रकात्रकात्रकात्रकात्रक		Lethaì target	Lethal target	Lethal target	Lethal open er	Lethal open er	Lethal open er	Lethal in an c	Lethal open er	
ENT) காஜ்க கூற் முவ	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	
OPEN ENVIRONMENT	C nels azalzzazes	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
AS IN OPEN	B short distersher?	Units	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	
ICM LETHAL AREAS IN	1 2 3 6 5 6 7	Parameter	AL(1)	AL(2)	AL(3)	AL(4)	AL(5)	AL(6)	AL(7)	AL(8)	
ICM		ID	ď	8	ပ	۵	ш	ш.	ŋ	I	

П							Card:	33	
Card: 33	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Lethal area per submissile for missile launcher target in an open environment	NOTE: A card of this type is required whenever an ICM round is specified on card type 29. It must be preceded by a type 32 card.					
INT	D Cartes as solar respect	Columns	65-72						
ENV I RONME	C C 149 20 21/22 23 24/25 24	Format	F8.2						
AS IN OPEN	B sharrafarersherr	Units	meters ²						
ICM LETHAL AREAS IN OPEN ENVIRONMENT	A 123/15471	Parameter	AL (9)						
IC		ID	Ι						

П										Card:	34	
Card: 34	A B C D E F P C C D E F P C C C D E F P C C C C C C C C C C C C C C C C C C	Description	Lethal area per submissile for standing personnel target in wooded environment	Lethal area per submissile for prone personnel target in wooded environment	Lethal area per submissile for crouching person- nel target in wooded environment	Lethal area per submissile for tank target in wooded environment	Lethal area per submissile for APC target in wooded environment	Lethal area per submissile for truck target in wooded environment	Lethal area per submissile for artillery tube target in wooded environment	Lethal area per submissile for radar target in wooded environment		
MENT	ि श्रीकटन स्टीय प्रतिकटन	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64		
ED ENVIRON	C C C C C C C C C C C C C C C C C C C	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
IS IN WOODE	B B in ista ista	Units	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²		
ICM LETHAL AREAS IN WOODED ENVIRONMENT	A 8 6 2 1	Parameter	AL(10)	AL(11)	AL (12)	AL (13)	AL(14)	AL(15)	AL(16)	AL (17)		
ICN		ID	А	8	ပ	0	ш	ட	5	Ŧ		

						× 10.74	Card:	34	_
Card: 34	B C D E F G H II	Description	Lethal area per submissile for missile launcher target in wooded environment	NOTE: A card of this type is required whenever an ICM round is specified on card type 29, and NEV≥2 is specified on card type 12. It must be preceded by a type 33 card.					
MENT	D crips as subs separates	Columns	65-72						
D ENVIRON	C who may a state as as	Format	F8.2						
AS IN WOODE	B spandawsker	Units	meters ²						
ICM LETHAL AREAS IN WOODED ENVIRONMENT	A 12 2 4 5 6 7 6 9 6 11	Parameter	AL (18)						
ICM		ID	I						

										Card:	35	
Card: 35	A B C D E F G H II	Description	Lethal area per submissile for standing personnel target in town environment	Lethal area per submissile for prone personnel target in town environment	Lethal area per submissile for crouching person- nel target in towm environment	Lethal area per submissile for tank target in town environment	Lethal area per submissile for APC target in town environment	Lethal area per submissile for truck target in town environment	Lethal area per submissile for artillery tube target in town environment	Lethal area per submissile for radar target in town environment		
TN	D s zripe za sudor sz zapa	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64		
TOWN ENVIRONMENT	C 10 10 20 20 20 20 20 20 20 20 20 20 20 20 20	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
	B senstansten	Units	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²		
ICM LETHAL AREAS IN	A 1 2 3/4 5 6/7	Parameter	AL (19)	AL (20)	AL(21)	AL (22)	AL (23)	AL (24)	AL (25)	AL (26)		
ICM		ID	А	8	ပ	0	ш	L	5	I		

						Card:	35
Card: 35	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Lethal area per submissile for missile launcher target in town environment	NOTE: A card of this type is required whenever an ICM round is specified on card type 29, and NEV \geq 3 is specified on card type 12. It must be preceded by a type 34 card.			
INT	D szekecesekerepedes	Columns	65-72				
TOWN ENVIRONMENT	C 5 242 52 52 52 12 82 8481	Format	F8.2				
Z	B shorridana ishisez	Units	meters ²				
M LETHAL AREAS	A 123/056/70	Parameter	AL (27)				
ICM		ID	I				

										Card:	36
Card: 36	A B C D E F G H I distribution in the script en superentation is a parameter of the second entrangement of the second entrangemen	Description	Lethal area per submissile for standing personnel target in grassy environment	Lethal area per submissile for prone personnel target in grassy environment	Lethal area per submissile for crouching person- nel target in grassy environment	Lethal area per submissile for tank target in grassy environment	Lethal area per submissile for APC target in grassy environment	Lethal area per submissile for truck target in grassy environment	Lethal area per submissile for artillery tube target in grassy environment	Lethal area per submissile for radar target in grassy environment	
NMENT	D S 27 pe 28 30pt 32 13pt	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	
GRASSY ENVIRONMENT	C R 2425 22 2425 2425 24	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
	B s s he n zala na na na na	Units	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	meters ²	
ICM LETHAL AREAS IN	A 1 2 3 4 5 6/7	Parameter	AL (28)	AL(29)	AL (30)	AL(31)	AL (32)	AL (33)	AL (34)	AL (35)	
ICM		ID	A	ω	S	0	ш	LL.	5	I	

						Card:	36
Card: 36	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Lethal area per submissile for missile launcher target in grassy environment	NOTE: A card of this type is required whenever an ICM round is specified on card type 29, and NEV = 4 is specified on card type 12. It must be preceded by a type 35 card.			
MENT	O Carata	Columns	65-72				
GRASSY ENVIRONMENT	C 69 20 21 22 22 23 24	Format	F8.2				
	B s s ha m agna sa	Units	meters ²				
ICM LETHAL AREAS IN	A 1 2 3 4 5 6 7 0	Parameter	AL (36)				
ICA		ID	Ι				

						Card: 37	
Card: 37	00 61 61 11 31 31 31 71 11 11 10 00		or CLGP data	quired whenever d type 29. It ird specifying			
UND	सारा प्राप्त के स्थान के स्थान के स्थान के स्थान के स्थान के अल्बा के अल्बा के स्थान के स्थान के स्थान के स्थान	Description	Number of interpolation points for CLGP data (current maximum value of 15)	NOTE: A card of this type is required whenever a CLGP round is specified on card type 29. It must be preceded by a type 29 card specifying this round type.			
R CLGP RO	त्वा या । विकास स्टब्स्य इ	Columns	1-5				
ATION POINTS FOR CLGP ROUND	7 SZP2 82 72 12 82 64 81	Format	15				
RPOLATION	9 10 11 12 13 14 15	Units	1				
NUMBER OF INTERPOL	A 1 2 3 4 5 6 7 8 9 10 11 1	Parameter	NIP				
NO		ID	A				

CLGP DATA 1.3 c.4 c. plan B. C. Cornat Columns Description Parameter Units Format Columns Description TFK(J) minutes F8.2 1-8 Time available to fire CLGP (j th interpolation point) KNNF(J) F8.2 9-16 Number of CLGP's fired within time available interval C. VKI(J) F8.2 T7-24 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 S5-32 Number of fanks destroyed within time available interval (j th interpolation point) VKZ(J) F8.2 S5-32 S5-32									10 . 30
Para Para VK1 VK2 VK3 VK3		हिस्सा स्थान स्थान स्थान स्थान कर का कि अपने अपने अपने अपने स्थान स्थान स्थान स्थान स्थान स्थान स्थान स्थान स्थान	Description	Time available to fire CLGP (j th interpolation point)	Number of CLGP's fired within time available interval based on 2 tubes (jth interpolation point)	Number of tanks destroyed within time available interval (j th interpolation point)	Number of APCs destroyed within time available interval (jth interpolation point)	Number of trucks destroyed within time available interval (jth interpolation point)	NOTE: The number of cards of this type is determined by the value of NIP specified on a card type 37, which must precede these cards (15 cards maximum). The last card of this type 38 set must be followed by a type 39 and type 40 card, in that order. Cards of this set must be ordered by increasing TFK values.
Para Para VK1 VK2 VK3 VK3		D same same	Columns	1-8	91-6	17-24	25-32	33-40	
Para Para VK1 VK2 VK3 VK3		C nesarezares	Format	F8.2	F8.2	F8.2	F8.2	F8.2	
Para Para VK1 VK2 VK3 VK3		B spenganspen	Units	minutes	1	1	1	1	
C C B B B B B B B B B B B B B B B B B B	P DATA	1 2 3 4 5 67	Parameter	TFK(J)	XNRF(J)	VK1 (J)	VK2(J)	VK3(J)	
	CLG		ID	A	8	ပ	0	ш	

									T	Card:	39	
Card: 39	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	First range value for range versus EFC table for ith round type	Second range value for range versus EFC table for ith round type	Third range value for range versus EFC table for i th round type	Fourth range value for range versus EFC table for ith round type	Fifth range value for range versus EFC table for ith round type	Sixth range value for range versus EFC table for ith round type	Seventh range value for range versus EFC table for ith round type	Eighth range value for range versus EFC table for ith round type		
	D 27 22 20 30 32 33 34 3	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64		
	C C S 20 20 22 23 2425 20	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2		
JES	B Spen zha shen	Units	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters	kilo- meters		
CLGP RANGE VALUES	A 123/4567	Parameter	RG(I,1)	RG(1,2)	RG(I,3)	RG(1,4)	RG(1,5)	RG(1,6)	RG(1,7)	RG(I,8)		
CLE		ID	A	8	ပ	0	ш	ц.	9	Ŧ		

							Ca	rd:	39	
			for	for						
39	JREF		table	tab le	a set is					
Card:	11 12 11 11 11 11 11 11 11 11 11 11 11 1		EFC	EFC	Mor					
Č	I des es cala		rsus	rsus	t fol GP ro					
	2 62 6465 6	ion	e ve	e ve	a CL					
	工 88 88 88	Description	rang	rang	type ever e 29.					
	A B C D E F G H I I J	Des	Ninth range value for range versus EFC table for i th round type	Tenth range value for range versus EFC table for ith round type	NOTE: A Card of this type must follow a set of type 38 cards whenever a CLGP round is specified on card type 29.					
	G Sessions		ra 1ue oe	/a lue >e	d of ards card					
	1546 17 18		nge v d typ	nge v d typ	Carc 38 cc d on					
	F cokes as		ch ra	ch ra	Sype Sype					
	E Spr 30 3940		Nint	Tent	NOTE of t spec					
	c st refer to	Su	01							
	D Paras supa	Columns	65-72	73-80						
	114257617	at C								
	C	Format	F8.2	F8.2						
	st Tileit									
	В	Units	kilo- meters	kilo- meters						
RANGE VALUES	1 1 1 1	_		ΑE						
GE V	A 2 3/4 5	eter	(6,	RG(1,10)						
RAN		Parameter	RG(1,9)	RG(I						
CLGP		ID		7						

					-				10	Card:	40
EACH RANGE VALUE (CLGP)	A B C D E F G ST 10 19 photo that no explores the standard or	Description	Equivalent full charge value at first range value for ith round type	Equivalent full charge value at second range value for i th round type	Equivalent full charge value at third range value for ith round type	Equivalent full charge value at fourth range value for ith round type	Equivalent full charge value at fifth range value for ith round type	Equivalent full charge value at sixth range value for ith round type	Equivalent full charge value at seventh range value for ith round type	Equivalent full charge value at eighth range salue for ith round type	40
ACH RANGE	ि प्राथम का अस्ति का अस्ति	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	
NLUE AT E	C nels a zazz za zes z	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
CHARGE VA	B B short short short	Units	1	1	<i>\$</i>	1	1	1	1	1	
EQUIVALENT FULL CHARGE VALUE AT	A . 1 2 3 4 5 6 7	Parameter	CHG(I,1)	СНG(1,2)	CHG(I,3)	CHG(I,4)	CHG(I,5)	CHG(1,6)	CHG(1,7)	CHG(I,8)	
EQL		ID	A	ω	ပ	۵	ш	LL	5	Ι.	

	•					 	 Card:	40
CHARGE VALUE AT EACH RANGE VALUE (CLGP)	A B C D E F G H I I J	Description	Equivalent full charge value at ninth range value for i th round type	Equivalent full charge value at tenth range value for ith round type	NOTE: A card of this type must follow each type 39 card whenever a CLGP round is specified on card type 29.		Card:	40
ACH RANGE	D szes sz szes szeszes	Columns	65-72	73-80				
ILUE AT E	C R santa a sess	Format	F8.2	F8.2				
	B sharraftare sherr	Units	-	1	b			
EQUIVALENT FULL	A 123/15/1	Parameter	СнG(1,9)	СНG(1,10)				
EQU		ID	I	7				

				Card:	41
Card: 41	7 CB CC 71 71 71 72 72 72 73 00		ions in the game		
	A १ र ३ (र १ १ १ १) मानी स्थापनिक स्थापन स्यापन स्थापन स	Description	Number of Blue artillery battalions in the game (current maximum value of 11)		
S	Apr 25 10 25 12 12 13	Columns	1-5		
LLERY BATTALIONS	12 SZ#22 23 22 #18 02 0 #181	Format			
ARTI	0 9 10 11 12 13 14 15 12	Units	-		
NUMBER OF BLUE	1 2 3 4 5 617	Parameter	NBN		
NUM		ID	A		

												Card: 42
Card: 42	DEFFGH IN NOP	Description	Number of emplacements for i th FDC (≤10)	Number of batteries assigned to ith FDC (≤ 6)				Alphanumeric description of i th FDC				NOTE: A maximum of 13 cards of this type may be required, based on the value of NBN entered on data card type 41. The first two cards of this type must specify that NB = 0. Each card is then followed by a type 43 card. All other cards of this type must be followed by either a type 43 or type 44 card. The first card of this type must be for the Division FDC, and the second card of this type must be for the Group FDC.
	F G	Columns	1-5	01-9	11-15	16-20			•	71-75	08-92	
	D E	Format	15	15	A5	A5				A5	A5	
ION DATA	C Spett tegts to 15h6 17	Units		-	1	1				1	1	
FDC IDENTIFICATION	A B 1 2 3 1 2 3 6 7 8 3 6 7 11 2	Parameter	NSITEF(I)	NB	BNXID(1)	BNXID(2)				BNXID(13)	BNXID(14)	
FDC		ID	A	В	ပ	٥	•	•	•	0	۵	

Card: 43	A B C D D D September of the state of the september of th	Description	Arrival time at j th emplacement of i th FDC	Departure time from j th emplacement of i th FDC	x-coordinate of j th emplacement of i th FPC	y-coordinate of j th emplacement of i th FPC	NOTE: As many as 10 cards of this type may be required for Group and Division FDC units. The number of cards required is based on the value of NSITEF(I) specified on card type 42. This data type set must be preceded by a type 42 card. A set of this type data cards is required for both the Group and Division FDCs.	Card:	43
1SION)	D	Columns	1-8	9-16	17-24	25-32			
UP OR DIV	C 00 20 20 22 23 2425 35	Format	F8.2	F8.2	F8.2	F8.2	19 19		
T DATA (GRO	B spenskersherr	Units	minutes	minutes	kilo- meters	kilo- meters			
EMPLACEMENT DATA (GROUP OR DIVISION	A 1 2 3 4 5 6 7 1	Parameter	TAF(J,1)	TDF(J,I)	XSF(J,I)	YSF(J,I)			
FDC		ID	A	В	ပ	٥			

ENTIFICATION DATA C D E F G H I J J K L M N O O Description List Format Columns 15 1-5 Number of emplacements for ith friendly battery 16 6-10 Must be left blank A5 11-15 A5 16-20 A5 71-75 A5 71-75 A5 71-75 A5 T1-75 A5 T1-75 A5 T1-75 A5 T1-75 A5 T1-75 A5 T1-75 A6 T1-75 A6 T1-75 A7 T1-75 A8 T1-75 A8 T1-75 A9 T1-75 A9 T1-75 A1 T1-75 A5 T1-75 A5 T1-75 A6 T1-75 A7 T1-75 A8 T1-75 A8 T1-75 A9 T1-75 A9 T1-75 A1 T1-75 A1 T1-75 A5 T1-75 A6 T1-75 A7 T1-75 A8 T1-75 A8 T1-75 A9 T1-75 A9 T1-75 A1 T1-75 A1 T1-75 A5 T1-75 A6 T1-75 A7 T1-75 A8 T1-75 A8 T1-75 A9 T1-75 A9 T1-75 A9 T1-75 A9 T1-75 A1 T1-75 A1 T1-75 A5 T1-75 A6 T1-75 A7 T1-75 A8 T1-75 A9 T1-75
Card: 44 R
Number of emplacem Number of emplacem Must be left blank Blue battery NOTE: Each card or by a type 42 card card. The maximum is currently fixed
ATA F G columns 1-5 6-10 11-15 16-20 66-70 71-75
1CATION DI D E Publication of the publication of th
Units Units
A B C D E F

Œ	
DENTIFICATION NUMBER Card: 45 April Ap	
Columns 1-8	
JMBER The sander of the sande	
Units Units	
BATTERY IDENTIFICATION NUMBER 1.1.16.5 of 1.10 m date upstraughstands D. Parameter Units For A. BRYID(I) F8	
A A	

									Card:	46
Card: 46	A B C D E E TO THE STATE OF TO TO THE STATE OF THE STAT	Description	Time of arrival at j th emplacement of i th Blue battery	Time of departure from j th emplac ement for ith Blue battery	x-coordinate of j th emplacement for i th Blue battery	y-coordinate of j th emplacement for i th Blue battery	Distance from FEBA of j th emplace ment for ith Blue battery (recalculated in prog ram and may be left blank on card)	NOTE: A set (10 cards maximum) must follow each type 45 card of the input data deck. The maximum number of sets of this type card is currently fixed at 33.		
	E uptasaptas	S	T1 B1					S T B S		
DATA	ը Հոգեությագիոյա	Column	1-8	9-16	17-24	25-32	33-40			
ON EMPLACEMENT DATA	C 10ps 20 cultur 22 cps 2	Format Columns	F8.2	F8.2	F8.2	F8.2	F8.2			
	B spenskusten	Units	minutes	minutes	kilo- meters	kilo- meters	kilo- meters			
BATTERY AND BATTAL	A 123/4567	Parameter	TA(J,I)	TD(J,I)	XS(J,I)	YS(J,I)	DEPTH(J,I)			
BA		ID	A	B	ပ	٥	ш			

ROUND IDS PER ENVIRONMENT A B C D E E C D E E C C C C C C C C									
A B C D E ENVIRONMENT A B B C D D E 1.3									Card: 47
NRG(J)		साम् अस्य स्थानम् स्थानम् स्थानम् अस्य अस्य अस्य अस्य अस्य अस्य स्थानम् स्थानम् स्थानम् स्थानम् स्थानम् स्थानम्	Description	Posture identification number	Number of round types allowed for j th posture in an open environment	Number of round types allowed for j th posture in a wooded environment	Number of round types allowed for j th posture in a town environment (=0 if NEV <3)	Number of round types allowed for $j^{\mbox{th}}$ posture in a grassy environment (=0 if NEV = 3)	NOTE: The maximum number of cards of this type is 10, one card for each of the 10 estimated postures in the game. Each card of this type must be followed by from one to five type 48 cards, depending upon the value of NRO(J) entered in columns 6-10 of this card. For personnel postures NRO = NRW = NRT = NRG = 1. The program ignores these values, but it is necessary to read in at least one round type for each environment and personnel posture.
NRG(J)		स्त्रात क्रियाक्री	Columns	1-5	9-10	11-15	16-20	21-25	
NRG(J)) E (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Format	15	15	15	15	15	
ROUND IDS PER E A B B A NP C NRW(J) E NRG(J) E NRG	NVIRONMENT	C C Short rafte 17	Units	1	1	1	1	1	
RO C C C	UND IDS PER E	A B	Parameter	NP	NRO(J)	NRW(J)	NRT(J)	NRG(J)	
	ROI		ID	A	8	S	۵	ш	

										Card:	48
RONMENT Card: 48	A B C D E F G H I I J	Description	First round ID for an open environment for jth posture	Second round ID for an open environment for jth posture	Third round ID for an open environment for j th posture	Fourth round ID for an open environment for jth posture	Fifth round ID for an open environment for jth posture	Sixth round ID for an open environment for jth posture	Seventh round ID for an open environment for j th posture	Eighth round ID for an open environment for j th posture	
DEN ENVI	D szópaca soprzepo	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	
FOR AN (C nels a refer to refer	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
IDS FOR Jth POSTURE FOR AN OPEN ENVIRONMENT	B sendana	Units	1	1	1	1	1	1		1	
ND IDS FOR	123/1567	Parameter	ORVM(1,J)	ORVM(2,J)	ORVM(3,J)	ORVM(4,J)	ORVM(5,J)	ORVM(6,J)	ORVM(7,J)	ORVM(8,J)	
ROUND		ID	A	8	U	0	ш	ш	9	I	

					Card: 48
Card: 48	ไ เลยสาการเราหณะเลย		conment for jth	onment for j th	20, one additional cards 30, two additional cards 40, three additional cards 45, four additional cards he first card of each set preceded by a type 47 card, each set must be followed or personnel postures, a round ID (any round) will
ENVIRONMENT	A B C D E F G H I I I I J I I S I I I I I I I I I I I I	Description	Ninth round ID for an open environment for jth posture	Tenth round ID for an open environment for jth posture	NOTE: 10 < NRO(J) ≤ 20, one additional card required; 20 < NRO(J) ≤ 30, two additional cards required; 30 < NRO(J) ≤ 40, three additional cards required; 40 < NRO(J) ≤ 45, four additional cards required. Ten sets of this type card are required; one for each posture type. The first card of each set of this type must be preceded by a type 47 card, and the last card of each set must be followed by a type 49 card. For personnel postures, a single card with one round ID (any round) will suffice.
OPEN ENVI	D Carlos sa sept 2 a	Columns	65-72	73-80	
E FOR AN OPEN	C 22/22 22 22/22 22	Format	F8.2	F8.2	
Jth POSTURE	B Berrichtsteinen	Units		1	
ROUND IDS FOR	A 1 2 3 4 5 5 7 1	Parameter	ORVM(9,J)	ORVM(10,J)	
ROI		ID	Ι	2	

								Card: 49
ENT Card: 49	A B C D E F G H I I J	Description	First round ID for a wooded environment for jth posture	Second round ID for a wooded environment for j th posture			Ninth round ID for a wooded environment for j th posture	
IRONM	E 435.34		F. O	Se			i N Oq	
FOR A WOODED ENVIRONMENT	D Checke 16 och 25 och 25	Columns	1-8	9-16	•		65-72	
FOR A WO	C cs 22/22 22 2425 24	Format	F8.2	F8.2	•		F8.2	
th POSTURE	B Spenialiseisheim	Units		1			1	
D IDS FOR J th	A 1 2 3 4 5 6/7 6	Parameter	WRVM(1,J)	WRVM(2,J)		•	WRVM(9,J)	
ROUND		ID	A	<u></u>	 			
_					 			

					Card: 49
RONMENT Card: 49	B C D E F G H II	Description	Tenth round ID for a wooded environment for j th posture	NOTE: 10 < NRW(J) ≤ 20, one additional card required; 20 < NRW(J) ≤ 30, two additional cards required; 30 < NRW(J) ≤ 40, three additional cards required; 40 < NRW(J) ≤ 45, four additional cards required. Ten sets of this type card are required, one for each posture type. The first card of each set of this type must be preceded by the last card of a type 48 set. If NEV ≤ 3, the last card of each type 49 set must be followed by a type 50 card. For personnel postures, a single card with any round ID will suffice.	
DODED ENV	D April 13 substantia	Columns	73-80		
FOR A W	C westerness	Format	F8.2		
th POSTURE	B shendusashen	Units	-		
ROUND IDS FOR J th POSTURE FOR A WOODED ENVIRONMENT	A 1 2 3 4 5 6/7 0 9 9 9 10 11	Parameter	WRVM(10,J)		
RO		ID	ŋ		

ROUND IDS FOR J th POSTURE FOR A TOWN ENVIRONMENT	A B C D E F G H I I I J	Un	FB.2 1-8 First round ID for a town environment for j th posture	F8.2 9-16 Second round ID for a town environment for j th posture				F8.2 65-72 Ninth round ID for a town environment for j th posture	·
th POSTURE F	B Bennahanskannehen	Units							
JND IDS FOR J	A 65.96.5.67.1	Parameter	TRVM(1,J)	TRVM(2,J)				TRVM(9,J)	
ROL		ID	A	8	•	•	·	Н	

			ā		Card:	50	Contd.
Card: 50 Contd.	A B C D E F G H I I I I I I I I I I I I I I I I I I	Description	Tenth round ID for a town environment for j th posture	10 < NRT(J) < 20, one additional card required; 20 < NRT(J) < 30, two additional cards required; 30 < NRT(J) < 40, three additional cards required; 40 < NRT(J) < 45, four additional cards required. Ten sets of this type card are required, one for each posture type, only if NEV ≥ 3. The first card of each set of this type must be preceded by the last card of a type 49 set. If NEV = 4, the last card of each type 50 set must be followed by a type 51 card. For personnel postures, a single card with any round ID will suffice.			
	F 6		ound ID for	10 < NRT(J) required; 20 < NRT(J) required; 30 < NRT(J) required; 40 < NRT(J) required; The first cone for eacl The first cone first cone for eacl			
ONMENT	E 13 3 3 3 1 4 4 4 4 4		Tenth r	NOTE:			
OWN ENVIR	D chess such seads	Columns	73-80				
OSTURE FOR A TOWN ENVIRONMENT	C	Format	F8.2				
	B 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Units	-				
ROUND IDS FOR J th	A 1 2 3 4 5 6/1	Parameter	TRVM(10,J)				
RO M		OI	7				

ROUND IDS FOR J th POSTURE FOR A GRASSY ENVIRONMENT 1 A											Card	:	51	
UND 1DS FOR J th POSTURE FOR A GRASSY ENV A B C C D D C C D D D D D D D D D D D D D	Card: 51			ironment for j th	vironment for j th				ironment for j th					
UND 1DS FOR J th POSTURE FOR A GRASSY ENV A B C C D D C C D D D D D D D D D D D D D		H sactes outre cutes	escription	grassy env	grassy en				grassy env					
UND 1DS FOR J th POSTURE FOR A GRASSY ENV A B C C D D C C D D D D D D D D D D D D D		9 e a e e se se e e	0	ID for a	d ID for a				ID for a					
UND 1DS FOR J th POSTURE FOR A GRASSY ENV A B C C D D C C D D D D D D D D D D D D D	RONMENT	E F		irst round osture	econd round osture				inth round osture					
GRVM GRVM	GRASSY ENVI	D Szelen septense	Columns			•	<u>.</u>	•						
GRVM GRVM	RE FOR A	C Sape 22 22 22 22 2	Format	F8.2	F8.2			٠	F8.2					
GRVM GRVM		B shenightieishen	Units	1	1	•	•		1					
		A 1 2 3 4 5 6 7	Parameter	GRVM(1,J)	GRVM(2,J)				GRVM(9,J)					
	ROU					•		·				_		

					Ta
				4	Card: 51
Card: 51	A B C D E F G H I I J	u	Tenth round ID for a grassy environment for j th posture	l0 < NRG(J) < 20, one additional card required; 20 < NRG(J) < 30, two additional cards required; 30 < NRG(J) < 40, three additional cards required; 40 < NRG(J) < 45, four additional cards required; Ten sets of this type card are required, one for each posture type, only when NEV = 4. The first card of each set of this type must be preceded by the last card of a type 50 set. For personnel postures, a single card with any round ID will suffice.	
	H Ase so ender ez ezh	Description	assy er), one a), two a), three), four type, itype, if each che last istures,	
	G George Sules Su selss sus	Des	ID for a gr	NRG(J) < 20 red; NRG(J) < 30 red; NRG(J) < 45 red; NRG(J) < 45 red; ets of this ach posture irst card of ceeded by t ersonnel po	
ENT	. F 1001 1243 44 1545 47		n round]		
VIRONME	E ussabraese		Tenth re	NOTE:	
RASSY EN	D C sc 10 c 20	Columns	73-80		
E FOR A G	C 10/19 20 21/22 23 24/25	Format	F8.2		
J th POSTUR	B B pontalistation	Units	1		
ROUND IDS FOR J th POSTURE FOR A GRASSY ENVIRONMENT	A 1 2 3 4 5 6 7 1	Parameter	GRVM(10,J)		
8		ID	J		

П									>			Card: 52
Card: 52	A B C D E F G H I specification in the construction of the constru	Description	x-coordinate of first point on Scenario 3 boundary	x-coordinate of second point on Scenario 3 boundary	x-coordinate of third point on Scenario 3 boundary	x-coordinate of fourth point on Scenario 3 boundary	x-coordinate of fifth point on Scenario 3 boundary	x-coordinate of sixth point on Scenario 3 boundary	seventh point on Scenario 3 boundary	x-coordinate of eighth point on Scenario 3 boundary	x-coordinate of ninth point on Scenario 3 boundary	ired only when the as entered on card as read from card is the last type 50 the last type 51 the last type 51 present, it is card.
	अन्तिम अन्यविषयं योग्य समित्र सम्बन्ध का विषय		x-coordinate of firs	x-coordinate of seco	x-coordinate of thir	x-coordinate of four	x-coordinate of fift	x-coordinate of sixt	x-coordinate of seve	x-coordinate of eigh	x-coordinate of nint	NOTE: This type card is requvalue of SCENAR \$2.0 or \$4.0 type 2. If the value of NEV, type 12, =2, this card tollow card; if NEV = 3, it follows card; if NEV = 4, it follows card. Whenever this card is always followed by a type 53
YTES	0 C	Columns	1-8	9-16	17-24	25-32	33-40	41-48	49-56	57-64	65-72	
(-COORDINA	C	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
SCEWARIO 3 BOUNDARY X-COORDINATES	B s jes nizjus u spen	Units	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	
SCENARIO 3	A 1 2 3 4 5 6 7	Parameter	BNDX(1)	BNDX(2)	BNDX(3)	BNDX(4)	BNDX(5)	BNDX(6)	BNDX(7)	BNDX(8)	BNDX(9)	
		ID	A	8	ပ	0	ш	ш	9	I	П	

		T										Card: 53
Card: 53	A B C D E F G H I A STANDARD S	Description	y-coordinate of first point on Scenario 3 boundary	y-coordinate of second point on Scenario 3 boundary	y-coordinate of third point on Scenario 3 boundary	y-coordinate of fourth point on Scenario 3 boundary	y-coordinate of fifth point on Scenario 3 boundary	y-coordinate of sixth point on Scenario 3 boundary	seventh point on Scenario 3 boundary	y-coordinate of eighth point on Scenario 3 boundary	y-coordinate of ninth point on Scenario 3 boundary	NOTE: This type card is required only when a type 52 card is also required, and it appears immediately after the type 52 card. Whenever this card is present, it is always followed by a type 54 card.
	F G D 30 30 40 41 42 46 47 44 49 50 51 52 53 5455 50	De	-coordinate of first p	-coordinate of second	-coordinate of third	-coordinate of fourth	-coordinate of fifth p	-coordinate of sixth p	y-coordinate of seventh	-coordinate of eighth	-coordinate of ninth	OTE: This type card of a card is also require fter the type 52 card resent, it is always the
	D zrpe za mpr zepapa sa se	Columns	1-8 y	9-16 y	17-24 y	25-32 y	33-40 y	41-48 y	49-56 y	57-64 y	64-72 y	Z W & Q
Y-COORDINATES	C nets as references as	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
NDARY Y-COC	B s ple 11 12/13 te 15/16/17	Units	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	
SCENARIO 3 BOUNDARY	A 1 2 3 4 5 6 7	Parameter	BNDY(1)	BNDY(2)	BNDY(3)	BNDY(4)	BNDY(5)	BNDY(6)	BNDY(7)	BNDY(8)	BNDY(9)	
SCE		ID	A	8	ပ	0	ш	LL_	5	Ŧ	П	

						Card:	54
Card: 54	भारता सामान्य का जाने कर को कर को कर को कर को कर को अपने का को अपने कर को कर को कर को कर को कर को कर को उन्हें जिस्सा को अपने कर को कर को कर को कर को कर को कर को अपने कर को अपने कर को कर को कर को कर को कर को अपने का जाने	Description	Number of end points for FEBA trace line segments (maximum value of 10)	Number of FEBA traces (maximum value of 10)	NOTE: If a type 53 card is required, it is always followed by this type card. If a type 53 card is not required, and the value of NEV from card type 12 = 2, this card follows the last type 49 card; if NEV = 3 this card follows the last type 50 card; if NEV = 4, this card follows the last type 51 card. It must be followed by a type 55 card.		
ES	क्षेत्र स्टब्स्य स्टब्स्	Columns	1-5	01-9			
EBA TRACE	ne zapranen	Format	15	15			
OINTS AND F	B spendarsken	Units	-	1			
NUMBER OF ENDPOINTS AND FEBA TRACES	A B	Parameter	NPS	NFT			
NUM		ID	A	ω			

FEBA TRACE END POINT COORDINATES 1.1/4 st the magnetic reference of the magnetic reference refere														Cand: EE
BA TRACE END POINT COORDINATES 1		ไ เลเมเกาลเสมเสรากาเขต		of j th FEBA trace	of j th FEBA trace	of j th FEBA trace	of jth FEBA trace	of j th FEBA trace	of jth FEBA trace	of j th FEBA trace	of j th FEBA trace	of j th FEBA trace	of j th FEBA trace	
BA TRACE END POINT COORDINATES 1		H G H H H H H H H H H H H H H H H H H H	Description	nate of first end point	late of first end point	nate of second end point	late of second end point	late of third end point	nate of third end point	late of fourth end point	nate of fourth end point	nate of fifth end point	nate of fifth end point	he first card of this ty by the type 54 card. Is 54, an additional card red for each FEBA trace. If 10 FEBA traces allower of 10 sets of type 55 come or two cards per stard must be followed by
BA TR A(1 B(1 B(2) B(3) B(3) B(4) B(4) B(5) B(5)		E E 3434 35 3647 38 38 40 41 4243	Sut											NOTE: The preceded card type is requiremaximum of a maximum of either type 55 of the cardinates.
BA TR A(1 B(1 B(2) B(3) B(3) B(4) B(4) B(5) B(5)		D S se sripe es subs	Colum	1-8	9-16	17-2	25-3	33-4	41-4	49-5	57-6	65-7	73-8	
BA TR A(1 B(1 B(2) B(3) B(3) B(4) B(4) B(5) B(5)	RDINATES	C	Format											
BA TR A(1 B(1 B(2) B(3) B(3) B(4) B(4) B(5) B(5)	POINT COOF	B B and an appen	Units	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	kilometers	
FE G G G G G G G G G G G G G G G G G G G	BA TRACE END	A 1 2 3 4 5 617	Parameter	A(1,J)	B(1,J)	A(2,J)	B(2,J)	A(3,J)	B(3,J)	A(4,J)	B(4,J)	A(5,J)	B(5,J)	
	E		ID	A	8	S	0	ш	ш	5	I	П	٦	

													Card: 56
Card: 56	A B C D E F G H I special and secular and a supersupersupersupersupersupersupersuper	Description	Activation time of first FEBA trace	Activation time of second FEBA trace	Activation time of third FEBA trace	Activation time of fourth FEBA trace	Activation time of fifth FEBA trace	Activation time of sixth FEBA trace	Activation time of seventh FEBA trace	Activation time of eighth FEBA trace	Activation time of ninth FEBA trace	Activation time of tenth FEBA trace	NOTE: This card must follow the last type 55 card and must precede the type 57 card.
	E sadom:		Act	Act	Act	Act	Act	Act	Act	Act	Act	Act	Car
	ी जिस्साय विकास स्वीत ह	Columns	1-8	91-6	17-24	25-32	33-40	41-48	49-56	57-64	65-72	73-80	
	C 10 20 21 22 23 2425 21	Format	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	F8.2	
ACE	B spenskusten	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
TIME OF FEBA TRACE	A 12345671	Parameter	FEBACT(1)	FEBACT(2)	FEBACT(3)	FEBACT(4)	FEBACT(5)	FEBACT(6)	FEBACT(7)	FEBACT(8)	FEBACT(9)	FEBACT(10)	
TIN		ID	A	8	၁	0	ш	ш	g	Ξ	ī	2	

											C	ard:	57	
Card: 57	A B C D E F G H I J K L M N 1.2.3 4.5 6 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Description	Maximum number of battalions allowed to mass fire on any one fire mission	Effects cutoff value for first posture	Effects cutoff value for second posture		•	Effects cutoff value for ninth posture	Effects cutoff value for tenth posture	Round type criteria flag (=1.0, cost criterion)	Defeat level	Maximum number of GSRS batteries allowed to mass fire on any one fire mission		
	F F 72 23 342 32 3324	Columns	1-5	11-9	12-17			54-59	9-09	02-99	71-75	76-80		
O	D E	Format	15	F6.4	F6.4			F6.4	F6.4	F5.3	F5.3	15		
VALUES CAR	B C	Units	-	1	1		•	-	1	1	-	1		
EFFECTS CUTOFF VALUES CARD	A 1 2 3 4 5 6 7 0	Parameter	MASSLT	EC0F(1)	EC0F(2)	•	•	ECOF(9)	ECOF(10)	CRITRA	DL	MRKTLT		
EF		ID	А	В	ပ			٦	×		Σ	z		

													C	ard:	58a		
Card: 58a	A B C D E F G H I J K L M N O P	Description	Priority of battery of battalion														
	F G	Columns	1-5	01-9	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	26-60	61-65	02-99	
) E	Format	F5.0														
ITY VALUES	S C D	Units	-	1	1	1	1		ı	1	1	1	1	-	1	1	
BATTERY PRIORITY	A E	Parameter	FU00(1)	FU00(2)	FU0D(3)	FU00(4)	FU00(5)	FU0D(6)	FU00(7)	FU0D(8)	FU00(9)	FU00(10)	FU0D(11)	FU0D(12)	FU0D(13)	FU00(14)	
B		ID	A	В	ပ	۵	ш	LL.	9	Ξ	Ι	C	×	-	Σ	z	

									Card:	58a	
Card: 58a	A B C D E F G H I J K L M N O P	Description	Priority of battery of battalion	Priority of battery of battalion	NOTE 1: This type card always follows the type 57 card. If the total number of batteries is greater than 16, card type 58b must follow this card. Otherwise, it is followed by a type 59 card.	NOTE 2: FUOD(N) is priority of J th battery of battalion K where:	$N = J + \sum_{I=1}^{K-1} NBAT(1,I)$	NBAT(1,1) = number of batteries in Ith battalion (1 \leq NBAT(1,1) \leq 6)			
	F G	Columns	71-75	76-80							
	9hs 2021 22 23 242528	Format	F5.0	F5.0							
TY VALUES	S C S	Units		1							
BATTERY PRIORITY	A 123/45/8/7	Parameter	FUOD(15)	FU0D(16)							
BAT		ID	0	۵	A CONTRACTOR						

					-								С	ard:	58b		
Card: 58b	A B C D E F G H · I J K L M N O P 1.2.3] + S s s l · I J K L M N O P I .2.3] + S s l · I s hourdjan experzantes superzondes personale superzondes personal	Description	Priority of battery of battalion														
	F G 27 22 32 32 32 32 33 35 35	Columns	1-5	01-9	11-15	16-20	21-25	26-30	31-35	36-40	41-45	46-50	51-55	26-60	61-65	02-99	
	D E	Format	F5.0														
TY VALUES	C C shain ishen	Units	-	1	1	1	1	-	1	!	-	-	-	!	!	1	
BATTERY PRIORITY	A B	Parameter	FU0D(17)	FU0D(18)	FU00(19)	FU0D(20)	FU0D(21)	FU0D(22)	FU0D(23)	FU0D(24)	FU0D(25)	FU0D(26)	FU0D(27)	FU0D(28)	FU0D(29)	FU0D(30)	
B/		ID	A	В	ပ	٥	ш	<u>u</u> .	9	Ξ	Н	٦	×		Σ	z	

							Card: 58b	
Card: 58b	C D E F G H I J K L M N C P	Description	Priority of battery of battalion	Priority of battery of battalion	NOTE 1: This card follows card 58a when the total number of batteries is greater than 16. If the total number of batteries is greater than 32, it is followed by card 58c. Otherwise, it is followed by a type 59 card.	NOTE 2: See NOTE 2 of card 58a.		
	F G	Columns	71-75	76-80				
	D E	Format	F5.0	F5.0				
TY VALUES	B C	Units	1	1				
BATTERY PRIORITY	A B	Parameter	FU0D(31)	FUOD(32)				
BA.		ID	0	۵				

									Card: 58c
Card: 58c	CDEFFGN N N N DP P	Description	Priority of battery of battalion	Priority of battery of battalion		Priority of battery of battalion	NOTE 1: If total number of batteries > 48 but less than 65, one additional card of this type is required. If total number of batteries is greater than 64 but less than or equal to 66, two additional cards of this type are required. The last card of this type must be followed by a type 59 card.	NOTE 2: See NOTE 2 of card 58a.	
	F G	Columns	1-5	01-9	•	76-80			
	D E	Format	F5.0	F5.0		F5.0			
ITY VALUES	S C C	Units	-	!		1			
BATTERY PRIORITY	A B	Parameter	FUOD(33)	FU00(34)		FU00 (48)			
		10	А	8		Ь			
							3_128		

										T	Car	d: 5	9	
Card: 59	C D E F G H I J K L M I Antiboral personal perso	Description	Placement number of FDC laterally backing up Division FDC	Placement number of FDC laterally backing up Group FDC	Placement number of FDC laterally backing up first battalion FDC	Placement number of FDC laterally backing up second battalion FDC	Placement number of FDC laterally backing up third battalion FDC	Placement number of FDC laterally backing up fourth battalion FDC				Placement number of FDC laterally backing up tenth battalion FDC		
	F G	Columns	1-5	01-9	11-15	16-20	21-25	26-30		٠		9-95		
	D E	Format	F5.0	F5.0	F5.0	F5.0	F5.0	F5.0	·		•	F5.0		
P OF FDCS	B C	Units	1	1	1	1	1	1				1		
LATERAL BACKUP OF	A B	Parameter	FDCD(1,1)	FDCD(1,2)	FDCD(1,3)	FDCD(1,4)	FDCD(1,5)	FDCD(1,6)				FDCD(1,12)		
7		ID	A	Ф	S	0	ш	ഥ	٠	٠	•	_1		

		T					Card:	59	
Card: 59	A B C D E F G H I J K L M TATATAN STATES TO BE F G H I J K L M TATATAN STATES TO STATE	Description	Placement number of FDC laterally backing up eleventh battalion FDC	NOTE: This card follows a 58a, 58b, or 58c card as indicated. It is always followed by a type 60 card.					
	F G	Columns	61-65						
) E	Format	F5.0						
P OF FDCS	S C I	Units							
LATERAL BACKUP	A E	Parameter	FDCD(1,13)						
ח		ID	Σ						

			U									Card:	60	
Card: 60	A B C D E F G H I J K L M 1.2.3 (4.5 (6) 1.6 s [10] II replaced to the state of the	Description	Placement number of reinforcing FDC for Division FDC	Placement number of reinforcing FDC for Group FDC	Placement number of reinforcing FDC for first battalion FDC	Placement number of reinforcing FDC for second battalion FDC	Placement number of reinforcing FDC for third battalion FDC				Placement number of reinforcing FDC for tenth battalion FDC	Placement number of reinforcing FDC for eleventh battalion FDC	NOTE: This card is always preceded by card type 59 and followed by card type 61.	
	F G	Columns	1-5	01-9	11-15	16-20	21-25	•		•	9-95	61-65		
	D E 20 21 22 23 24 25 2	Format	F5.0	F5.0	F5.0	F5.0	F5.0		•	•	F5.0	F5.0		
DCS	B C	Units		1		1	1				1	1		
REINFORCING FDCS	A 1 2 3 4 5 6 7 0	Parameter	FDCD(2,1)	FDCD(2,2)	FDCD(2,3)	FDCD(2,4)	FDCD(2,5)				FDCD(2,12)	FDCD(2,13)		
~		ID	А	B	ပ	0	ш	٠	•	•	_	Σ		

GE	GENERAL SUPPORT	REI	NFORCING FDCS		Card: 61
	A B	S C C	E E Reprisor to telesco	F G G	C D E F G H I J K L M March to the contract of
ID	Parameter	Units	Format	Columns	Description
A	FDCD(3,1)	1	F5.0	1-5	Placement number of GSR FDC for Division FDC
В	FDCD(3,2)	1	F5.0	01-9	Placement number of GSR FDC for Group FDC
၁	FDCD(3,3)	1	F5.0	11-15	Placement number of GSR FDC for first battalion FDC
0	FDCD(3,4)	1	F5.0	16-20	Placement number of GSR FDC for second battalion FDC
ш	FDCD(3,5)	1	F5.0	21-25	Placement number of GSR FDC for third battalion FDC
•		٠		•	
•	٠		٠		
•	•				
٦	FDCD(3,12)	1	F5.0	9-99	Placement number of GSR FDC for tenth battalion FDC
Σ	FDCD(3,13)	1	F5.0	61-65	Placement number of GSR FDC for eleventh battalion FDC
					NOTE: This card is always preceded by card type 60 and followed by card type 62.
					61

Г									_		Caro	1: 62		
Card: 62	C D E F G H I J K L M and the second of the	Description	Fire plan assignment of Division FDC to Division or Group	Fire plan assignment of Group FDC to Division or Group	Fire plan assignment of first battalion FDC to Division or Group	Fire plan assignment of second battalion FDC to Division or Group	Fire plan assignment of third battalion FDC to Division or Group				Fire plan assignment of tenth battalion FDC to Division or Group	Fire plan assignment of eleventh battalion FDC to Division or Group	(=1.0, assign to Division; =2.0, assign to Group)	NOTE: This card is always preceded by card type 61 and followed by card type 63.
	F G	Columns	1-5	01-9	11-15	16-20	21-25			•	26-60	61-65		
FDCS	D E	Format	F5.0	F5.0	F5.0	F5.0	F5.0			•	F5.0	F5.0		
SNMENT OF	C C	Units	1	-	1	1	1			•	1	1		
FIRE PLAN ASSIGNMENT OF FDCS	A B	Parameter	FDCD(4,1)	FDCD(4,2)	FDCD(4,3)	FDCD(4,4)	FDCD(4,5)				FDCD(4,12)	FDCD(4,13)		
FI		ID	A	œ	U	0	ш	•		٠	_	Σ		

						-			u	- 7.1	Card:	63
Card: 63	A B C D E F G H I J K A Special State September 1 B S September 1 B S September 1 B S S S S S S S S S S S S S S S S S S	Description	Tactical echelon identification of first battalion	Tactical echelon identification of second battalion				Tactical echelon identification of tenth battalion	Tactical echelon identification of eleventh battalion	(=1., direct support; =2., reinforcing; =3., general support at Divison; =4., general support reinforcing at Division to a direct support battalion; =5., general support reinforcing at Group, and reinforcing only to Division; =6., general support to Group)	NOTE: This card is always preceded by card type 62 and followed by card type 64.	
	F G	Columns	1-5	01-9			•	46-50	51-55			
ECHELON ID) E	Format	F5.0	F5.0	٠	•	•	F5.0	F5.0			
	3 C D	Units	+	1	•	•		;	1			
BATTALION TACTICAL	A B	Parameter	BNEC(1)	BNEC(2)	•		•	BNEC(10)	BNEC(11)			
B		ID	A	8	•	·	٠	7	×			

														Card:	64	
Card: 64	A B C D E F G H I J K L M 12.3] es els respensables superes su	Description	Computer type available at Division FDC	Computer type available at Group FDC	Computer type available at first battalion FDC	Computer type available at second battalion FDC	Computer type available at third battalion FDC				Computer type available at tenth battalion FDC	Computer type available at eleventh battalion FDC	(=1, TACFIRE; =2, FADAC)	NOTE: This card is always preceded by card type 63 and followed by card type 65a.	In data cards 65a through 8 0b, the notation M/F stands for FADAC and T/F stands for TACFIRE.	
	F G	Columns	1-5	01-9	11-15	16-20	21-25			•	99-99	61-65				
ATION) E espaidas as a desa a	Format	15	15	15	15	15	•		•	15	15				
IDENTIFICA	B C D	Units		1	1	1	1			•	1	1				
FDC COMPUTER IDENTIFICATION	A	Parameter	MFDTYP(1)	MFDTYP(2)	MFDTYP(3)	MFDTYP(4)	MFDTYP(5)				MFDTYP(12)	MFDTYP(13)				
		ID	A	В	ပ	٥	ш	•	•	•	7	Σ				

							<u></u>				Card:	65a	
Card: 65a	A B C D E F G H I J K	Description	Transmission time of RFAF from battalion to Division or Group	Extra time needed to process a RFAF at battalion level	Time to process a TOT mission at battalion level	Time to process a TOT + FFE mission at battalion level	Time to process an OBS.ADJ mission at battalion level	Time to process a FFE mission at battalion level	Time to process and transmit an initial mission from Division to Group, or from Group to Division	Time to process and transmit a RFAF mission from Division to Group, or from Group to Division	Time to process a fire mission from Division to Group, or Group to Division	Time to process an initial fire mission at Division or Group	
IE DATA	E 27/20/23 30/21 32 33/24	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	50-56	57-63	64-70	
SSION TIM	C	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
UP TRANSMI	B sherrapsunsher	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
T/F UP TO T/F UP TRANSMISSION TIME DATA	A 1 2 3 4 5 6 7 8	Parameter	(1,1,1)MIT	TIM(2,1,1)	TIM(3,1,1)	TIM(4,1,1)	TIM(5,1,1)	TIM(6,1,1)	TIM(7,1,1)	TIM(8,1,1)	TIM(9,1,1)	TIM(10,1,1)	
1		ID	A	В	ပ	O	ш	ш	5	Ξ	н	7	

								Card:	6	5a	
Card: 65a	A B C D E F G H I J	Description	Time to process a RFAF mission Division or Group	NOTE: This card is always preceded by card type 64 and followed by card type 65b.							
ME DATA	E 27 120 28 30 31 32 33 34	Columns	71-77								
IISSION TI	C D	Format	F7.2								
UP TRANSM	B spenskismister	Units	minutes								
T/F UP TO T/F UP TRANSMISSION TIME DATA	A	Parameter	TIM(11,1,1)								
		ID	×								

											Car	d: 65b		
Card: 65b	L M N O P Q R S of the shear region replacements on the same and an edge of edges of the shear same and the s	Description	Time to process and RFAF an initial fire mission at Division or Group	Time to process and RFAF a RFAF mission at Division or Group	Time to process a MET message at Division or Group	Time to process a Survey request at battalion level	Time to process an ATI report at Division or Group	Time to process an ATI report at battalion level	Time to process one fire plan target at Division or Group (computer time only)	Time to process one fire plan target at battalion level (computer time only)	Time to process and transmit one fire plan target at Division or Group (computer and manual time)	Time to transmit one fire plan target f rom Division or Group to battalion level	NOTE: This card is always preceded by card 65a and followed by card 66a.	
E DATA	P Reter subs studys	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	20-56	57-63	64-70		
SION TIME	N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
UP TRANSMISSION TIME DATA	M Spendardarder	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
UP TO T/F	123/656/7	Parameter	TIM(12,1,1)	TIM(13,1,1)	TIM(14,1,1)	TIM(15,1,1)	TIM(16,1,1)	TIM(17,1,1)	(1,1,8)	(1,1,9)	TIM(20,1,1)	(1,1,1)		
T/F		ID		Σ	z	0	۵	0	œ	S	-	D		

													С	ard:	6	6a	
Card: 66a	A B C D E F G H I D K	Description					Same time of data as entered on	card 65a, except data are for M/F						This card is always preceded by card 65b and followed by card 66b.			
	Α 1.00 ×							_					_	NOTE:			
E DATA	E 27 pe (25 3 q 51 32 33 5 4 3	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-77				
SSION TIME	C	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2				
IP TRANSMIS	B sherrapanaher	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes				
M/F UP TO T/F UP TRANSMISSION TIME DATA	A 1 2 3 4 5 6/7 8	Parameter	TIM(1,2,1)	TIM(2,2,1)	TIM(3,2,1)	TIM(4,2,1)	TIM(5,2,1)	TIM(6,2,1)	TIM(7,2,1)	TIM(8,2,1)	TIM(9,2,1)	TIM(10,2,1)	TIM(11,2,1)				
M/		10	А	8	ပ	0	ш	ட	5	Ξ	П	7	×				

	- 1								-					ard:	66t)	
Card: 66b	N 0 P Q R S T U U D P Q R S S T R D D A Q R S S S S S S S S S S S S S S S S S S	Description					Same type of data as entered on	up to T/F up computers					NOTE: This card is always preceded by card 66a	and followed by card 67a.			
DATA	P Ages se sept se septe	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70					
SION TIME	N 0 N N N N N N N N N N N N N N N N N N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2					
P TRANSMIS	M Maringlands	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes					
M/F UP TO T/F UP TRANSMISSION TIME DATA	L M	Parameter	L TIM(12,2,1)	M TIM(13,2,1)	TIM(14,2,1)	TIM(15,2,1)	TIM(16,2,1)	TIM(17,2,1)	TIM(18,2,1)	TIM(19,2,1)	TIM(20,2,1)	TIM(21,2,1)					
M		CI		×	z	0	۵	0	æ	S	-	ח					

													C	ard:	67	a	
Card: 67a	A B C D E F G H I J K	Description					Same type of data as entoring on	card 65a, except data are for T/F						NOTE: This card is always preceded by card 66b and followed by card 67b.			
ME DATA	E zrbers sept se zebe	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	95-05	57-63	64-70	77-17				
TRANSMISSION TIME DATA	C D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2				
UP TRANSM	B sherrigisiensherr	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes				
DOWN TO T/F UP	A	Parameter	TIM(1,3,1)	TIM(2,3,1)	TIM(3,3,1)	TIM(4,3,1)	TIM(5,3,1)	TIM(6,3,1)	TIM(7,3,1)	TIM(8,3,1)	TIM(9,3,1)	TIM(10,3,1)	TIM(11,3,1)				
17.6		10	A	ω	ပ	O	ш	L	5	Ξ	П	7	×				

	•					,							Card:	67b	
Card: 67b		Description		À			Same type of data as entered on	down to T/F up computers					NOTE: This card is always preceded by card 67a and followed by card 68a.		
ME DATA	P 27/28/28 30(7) 32 33(34)	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70			
TRANSMISSION TIME DATA	0	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
	M M Markets	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F DOWN TO T/F UP	123/05671	Parameter	TIM(12,3,1)	TIM(13,3,1)	TIM(14,3,1)	TIM(15,3,1)	TIM(16,3,1)	TIM(17,3,1)	TIM(18,3,1)	TIM(19,3,1)	TIM(20,3,1)	TIM(21,3,1)			
1/1		ID	٦	Σ	z	0	Ь	ð	×	vì	-	n			

Г													Ca	rd: 68a	
Card: 68a	A B C D E F G H I J K	Description					to the de can't ome?	card 65a, except data are for M/F	down to 1/r up computers					NOTE: This card is always preceded by card 67b and followed by card 68b.	
ME DATA	E 27/201/29 30(3) 32 33(3) 35	Columnis	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	77-17		
AISSION TI	D D S 20 21 22 24 25 26	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
UP TRANSP	B B to 11 ch 21 to 15 to 17	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
M/F DOWN TO T/F UP TRANSMISSION TIME DATA	A 1 2 3 4 5 6 7 8	Parameter	TIM(1,4,1)	TIM(2,4,1)	TIM(3,4,1)	TIM(4,4,1)	TIM(5,4,1)	TIM(6,4,1)	TIM(7,4,1)	TIM(8,4,1)	TIM(9,4,1)	TIM(10,4,1)	TIM(11,4,1)		
M		ID	A	В	ပ	O	ш	ഥ	9	Ξ	Н	7	×		

Card: 68b	L M N O P Q R R S T U U I I I I U I I I I I I I I I I I I	Description					Same type of data as entered on	down to 1/F up computers					NOTE: This card is always preceded by card 68a and followed by card 69a.
IME DATA	P P P P P P P P P P P P P P P P P P P	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	27-63	64-70	
TRANSMISSION TIME DATA	O V	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
S	N 11 sik	ts	tes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
dn	M spenialisten	Units	minutes	mim	mim	mir	Ē	Ē	Ē	Ē	Ē	Ē	
	1 2 3 4 5 6 7 8 9 10 11 15 13 14 1	Parameter Unit	TIM(12,4,1) minu	M TIM(13,4,1) minu	N TIM(14,4,1) min	0 TIM(15,4,1) mir	TIM(16,4,1) mir	TIM(17,4,1) mir	TIM(18,4,1) mi	TIM(19,4,1) mi	TIM(20,4,1) mi	U TIM(21,4,1) mi	

Г													С	ard: 69a
Card: 69a	A B C D E F G H I D K	Description						Same type of data as entered on	up to M/F up computers					NOTE: This card is always preceded by card 68b and followed by card 69b.
	35,36,73		-					_						a a
E DATA	E 27/20/29 30/21 22 33/24	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-77	
SSION TIM	C 2422 22 22 12 02 8481	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
IP TRANSMI	B Benghamphen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
T/F UP TO M/F UP TRANSMISSION TIME DATA	A 1 2 3 4 5 6 7 9	Parameter	TIM(1,1,2)	TIM(2,1,2)	TIM(3,1,2)	TIM(4,1,2)	TIM(5,1,2)	TIM(6,1,2)	TIM(7,1,2)	TIM(8,1,2)	TIM(9,1,2)	TIM(10,1,2)	TIM(11,1,2)	
1/		ID	A	8	ပ	0	ш	ш	9	Ŧ	Н	٦	×	

Card: 69b	L M N O P Q R S T U U N N O P O R S T N U N N O P O R S S T S O R S S T N N N N N N N N N N N N N N N N N	Description					Same type of data as entered on	up to M/F up computers					NOTE: This card is always preceded by card 69a and followed by card 70a.	69b	
E DATA	A representative	Columns	1-7	8-14	15-51	22-28	29-35	36-42	43-49	99-09	57-63	64-70			
RANSMISSION TIME DATA	N O N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
UP TRANSMI	M shemidisiappen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F UP TO M/F	1 2 3 4 5 6 7 10	Parameter	TIM(12,1,2)	TIM(13,1,2)	TIM(14,1,2)	TIM(15,1,2)	TIM(16,1,2)	TIM(17,1,2)	TIM(18,1,2)	TIM(19,1,2)	TIM(20,1,2)	TIM(21,1,2)			
1-		ID	7	Σ	z	0	۵	0	æ	S	-	>			

													Ca	rd: 70a	
Card: 70a	K Sepan apprese magnetic							ered on e for M/F						d by card 69b	
	A B C D E F G H I O K	Description						card 65a, except data are for M/F	up to M/r up computers					NOTE: This card is always preceded by card 69b and followed by card 70b.	
	H 35 SEP 38 38													and	
ME DATA	6 27 20 20 30 33 33 33 33 33 33 33 33 33 33 33 33	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-77		
TRANSMISSION TIME	C D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
UP TRANSM	B shorizinatshan	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
M/F UP TO M/F	A 123/456/1	Parameter	TIM(1,2,2)	TIM(2,2,2)	TIM(3,2,2)	TIM(4,2,2)	TIM(5,2,2)	TIM(6,2,2)	TIM(7,2,2)	TIM(8,2,2)	TIM(9,2,2)	TIM(10,2,2)	TIM(11,2,2)		
M		ID	А	В	U	0	ш	ш	9	I	Н	5	×		

													Card: 70b	
Card: 70b	L M N O P Q R S TO T U U S A STANDARD SEA ST	Description					Same type of data as entered on	up to M/F up computers					NOTE: This card is always preceded by card 70a and followed by card 71a.	
IME DATA	P septe se repers	Columns	1-7	8-14	15-51	22-28	29-35	36-42	43-49	99-09	57-63	64-70		
TRANSMISSION TIME DATA	N 0 N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
F UP TRANS	M spenspenspen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
M/F UP TO M/F UP	1 2 3/4 5 6/7	Parameter	TIM(12,2,2)	TIM(13,2,2)	TIM(14,2,2)	TIM(15,2,2)	TIM(16,2,2)	TIM(17,2,2)	TIM(18,2,2)	TIM(19,2,2)	TIM(20,2,2)	TIM(21,2,2)		
		ID	٦	Σ	z	0	Ъ	0	æ	S	-	ח		

													Ca	ard: 7	la	
Card: 71a	A B C D E F G H I D K I S S I I S S S I I S S S I I S S S I I S S S I I S S S I I S	Description					so bosetue or etch to each ome?	card 65a, except data are for T/F	down to 1/1 up computers					NOTE: This card is always preceded by card 70b and followed by card 71b.		
IME DATA	E zipeza adm zezaba	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	77-17			
MISSION T	C D D S S S S S S S S S S S S S S S S S	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
F UP TRANSI	B s pon spanskien	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F DOWN TO M/F UP TRANSMISSION TIME DATA	A 123/456/1	Parameter	TIM(1,3,2)	TIM(2,3,2)	TIM(3,3,2)	TIM(4,3,2)	TIM(5,3,2)	TIM(6,3,2)	TIM(7,3,2)	TIM(8,3,2)	TIM(9,3,2)	TIM(10,3,2)	TIM(11,3,2)			
1		ID	А	8	၁	0	ш	ш	9	I	Н	2	×			

													Card:	71b	
Card: 71b	B s of s to state as the state	Description					Same type of data as entered on	down to M/F up computers					NOTE: This card is always preceded by card 71a and followed by card 72a.		
ME DATA	P darandarandara	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70			
ISSION TI	0 V	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
UP TRANSM	M september	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F DOWN TO M/F UP TRANSMISSION TIME DATA	123/4547	Parameter	TIM(12,3,2)	TIM(13,3,2)	TIM(14,3,2)	TIM(15,3,2)	TIM(16,3,2)	TIM(17,3,2)	TIM(18,3,2)	TIM(19,3,2)	TIM(20,3,2)	TIM(21,3,2)			
T/F		ID		Σ	z	1 0	Р	0 1	R	S	1 1	U			

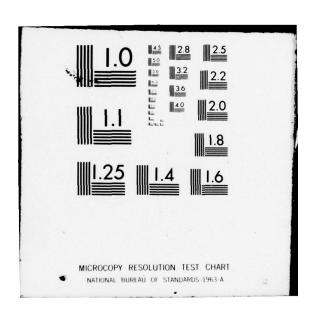
													С	ard: 72a
Card: 72a	A B C D E F G H I O K	Description					no boundary or each to court own?	card 65a, except data are for M/F	down to 1/1 up comparers					NOTE: This card is always preceded by card 71b and followed by card 72b.
ME DATA	27 20 223 30\$31 32 33\$34	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-77	
TRANSMISSION TIME DATA	C D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
	B shenialisidisten	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
M/F DOWN TO M/F UP	A 1 2 3 4 5 6 7 8	Parameter	A TIM(1,4,2)	B TIM(2,4,2)	C TIM(3,4,2)	D TIM(4,4,2)	TIM(5,4,2)	TIM(6,4,2)	TIM(7,4,2)	TIM(8,4,2)	TIM(9,4,2)	TIM(10,4,2)	TIM(11,4,2)	
M/F		ID	A	В	၁	0	ш	ட	5	王	Н	7	×	

													Card:	72b	
Card: 72b	L M N O P Q R S S S S S S S S S S S S S S S S S S	Description					Same type of data as entered on	M/F down to M/F up computers					NOTE: This card is always preceded by card 72a and followed by card 73a.		
ME DATA	A refer to refer to selective	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70			
TRANSMISSION TIME DATA	0 N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
UP TRANSP	M Sperrationalistic (1)	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
M/F DOWN TO M/F UP	123/456/76	Parameter	TIM(12,4,2)	TIM(13,4,2)	TIM(14,4,2)	TIM(15,4,2)	TIM(16,4,2)	TIM(17,4,2)	TIM(18,4,2)	TIM(19,4,2)	TIM(20,4,2)	TIM(21,4,2)			
M/		ID	7	Σ	z	0	۵	0	×	S	-	ח			

													To	ard.	732	
Card: 73a	C D E F G H I J K	Description					as bound to the do said one?	card 65a, except data are for	I/I up to I/I down comparers				C	NOTE: This card is always preceded by card 72b and followed by card 73b.	73a	
IE DATA	E para sepa sa sapa sa	Columns	1-1	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	() 77-17	Ca		
TRANSMISSION TIME DATA	U D D III	Format (F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
			minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F UP TO T/F DOWN	A B B 1123 4 5 6 3 10 5 9 6 11 12	Pari	A TIM(1,1,3)	TIM(2,1,3)	TIM(3,1,3)	TIM(4,1,3)	TIM(5,1,3)	TIM(6,1,3)	TIM(7,1,3)	TIM(8,1,3)	TIM(9,1,3)	TIM(10,1,3)	TIM(11,1,3)			
1		ID	A	В	ပ	0	ш	ш	5	I	н	7	×			

													Card:	73b
Card: 73b	L M N O P Q R S T U U I I I I I I I I I I I I I I I I I	Description					Same type of data as entered on	I/F up to T/F down computers					NOTE: This card is always preceded by card 73a and followed by card 74a.	
TIME DATA	P date subse subse	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70		
ISMISSION	0 N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
DOWN TRAN	M Spenialistensferi	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
T/F UP TO T/F DOWN TRANSMISSION TIME DATA	1 2 3 4 5 67 1	Parameter	TIM(12,1,3)	TIM(13,1,3)	TIM(14,1,3)	TIM(15,1,3)	TIM(16,1,3)	TIM(17,1,3)	TIM(18,1,3)	TIM(19,1,3)	TIM(20,1,3)	TIM(21,1,3)		
		ID	7	Σ	z	0	Ь	0	æ	S	۰	ח		

AD-A071 478 ARMY MATERIEL SYSTEMS ANALYSIS ACTIVITY ABERDEEN PROV--ETC F/G 9/2 ARTILLERY FORCE SIMULATION MODEL USER MANUAL. (U) JAN 79 R S SANDMEYER AMSAA-TR-263 N00123-76-C-0960 UNCLASSIFIED NL 30F4 AD A071478 Hlun



													С	ard:	74a	
Card: 74a	J K K september of process reported.	u					100	are for	bucers					sceded by card 73b		
	A B C D E F G H I O K	Description					one charb do court ome?	card 65a, except data are for	שויר עף נס וויר עטשוו כטוו		•			NOTE: This card is always preceded by card 73b and followed by card 74b.		
ITA	E n zapassapa	sum			-	8	35	7 7	6	99	33	0,	7	NO		
ME DA	s 27/28/29 30	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-17			
TRANSMISSION TIME DATA	C D D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
	B sportagandalen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
M/F UP TO T/F DOWN	A 1 2 3 4 5 6 7 6	Parameter	TIM(1,2,3)	TIM(2,2,3)	TIM(3,2,3)	TIM(4,2,3)	TIM(5,2,3)	TIM(6,2,3)	TIM(7,2,3)	TIM(8,2,3)	TIM(9,2,3)	TIM(10,2,3)	TIM(11,2,3)			
M/F		ID	A	В	ပ	0	ш	щ	5	Ξ	I	2	×			

													Card:	74b
Card: 74b	L M N O P O R S T U U III III U III III III III III III	Description					Same type of data as entered on	M/F up to T/F down computers					NOTE: This card is always preceded by card 74a and followed by card 75a.	
IME DATA	P Anna apera aper	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	20-56	57-63	64-70		
TRANSMISSION TIME DATA	0 1	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
	M M	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
M/F UP TO T/F DOWN	1 2 3 4 5 6/76	Parameter	TIM(12,2,3)	TIM(13,2,3)	TIM(14,2,3)	TIM(15,2,3)	TIM(16,2,3)	TIM(17,2,3)	TIM(18,2,3)	TIM(19,2,3)	TIM(20,2,3)	TIM(21,2,3)		
M		ID	7	Σ	z	0	۵	0	æ	S	—	-		

													To	ard: 75a
A Card: 75a	A B C D E F G H I I J K	Description					no bount or ctab to sout sens	card 65a, except data are for	ולו מסאנו כם ולו מסאנו כסווחתכנים					NOTE: This card is always preceded by card 74b and followed by card 75b.
TIME DAT	E 27 2629 30\$1 32 33\$24	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-17	
NSMISSION	C D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
F DOWN TRA	B shenigisieisher	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
T/F DOWN TO T/F DOWN TRANSMISSION TIME DATA	A 123/456/70	Parameter	TIM(1,3,3)	TIM(2,3,3)	TIM(3,3,3)	TIM(4,3,3)	TIM(5,3,3)	TIM(6,3,3)	TIM(7,3,3)	TIM(8,3,3)	TIM(9,3,3)	TIM(10,3,3)	TIM(11,3,3)	
1		ID	A	8	၁	0	ш	ᄔ	9	Ξ	Н	٦	×	

	-												Card:	75b	_
A Card: 75b	L M N O P Q R S T U U T S T U U T S T S T S T S T S T	Description					Same type of data as entered on	card 65b, except data are for T/F down to T/F down computers					NOTE: This card is always preceded by card 75a and followed by card 76a.		
TIME DAT	P P P P P P P P P P P P P P P P P P P	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	20-26	57-63	64-70			
SMISSION	N 0	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
DOWN TRAN	M spenutus wegen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
T/F DOWN TO T/F DOWN TRANSMISSION TIME DATA	1 2 3 4 5 97 6	Parameter	TIM(12,3,3)	TIM(13,3,3)	TIM(14,3,3)	TIM(15,3,3)	TIM(16,3,3)	TIM(17,3,3)	TIM(18,3,3)	TIM(19,3,3)	TIM(20,3,3)	TIM(21,3,3)			
1/1		ID	7	Σ	z	0	۵	0	œ	S	-	n			

														ard:	76a	
Card: 76a	A B C D E F G H I I J K	Description					as bounding on their de south smc2	card 65b, except data are for	נול ב מסאנו כס ולב מסאנו במווילית בבי					NOTE: This card is always preceded by card 75b and followed by card 76b.		
TIME DATA	E szipatas sapsi za zapka z	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	77-17			
SMISSION	O	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
DOWN TRAN	B Sharizana izana	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
M/F DOWN TO T/F DOWN TRANSMISSION TIME DATA	A 1 2 3 4 5 6 7 10	Parameter	A TIM(1,4,3)	B TIM92,4,3)	C TIM(3,4,3)	TIM(4,4,3)	TIM(5,4,3)	TIM(6,4,3)	TIM(7,4,3)	TIM(8,4,3)	TIM(9,4,3)	TIM(10,4,3)	TIM(11,4,3)			
M.		ID	A	8	၁	0	ш	ш	9	王	Н	7	×			

													Card:	76b
Card: 76b	N 0 P Q R S T U U T S T S T D D Q R seeden s	Description					Same type of data as entered on	card 65b, except data are for M/F down to T/F down computers					NOTE: This card is always preceded by card 76a and followed by card 77a.	
IE DATA	P A separate	Columns	7.	8-14	15-51	82-23	29-35	36-42	43-49	99-09	57-63	64-70	`	
MIL	SR mps	ပ္ပ	1-7	8	15	22	53	36	43	20	27	64		
SMISSION	N State of the second	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
DOWN TRAN	M spenspanspen	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
M/F DOWN TO T/F DOWN TRANSMISSION TIME DATA	L M	Parameter	TIM(12,4,3)	TIM(13,4,3)	TIM(14,4,3)	TIM(15,4,3)	TIM(16,4,3)	TIM(17,4,3)	TIM(18,4,3)	TIM(19,4,3)	TIM(20,4,3)	TIM(21,4,3)		
M/		ID	7	Σ	z	0	۵	0	æ	S	۲	ے		

Card:	77a
10 W/F DOWN TRANSMISSION TIME DATE 11.14.4) minutes F7.2 29-35 51.4) minutes F7.2 50-56 F7.2 51.4) minutes F7.2 50-56 F7.2 51.4) minutes F7.2 51.4) minutes F7.2 51.4) minutes F7.2 51.4) minutes F7.2 51.63 F7.2 51.4) minutes F7.2 51.63 F7.2 51.63 F7.2 51.75 F7.2 51.4) minutes F7.2 51.63 F7.2 51.40 minutes F7.2 51.63 F7.2 51.40 minutes F7.2 51.63 F7.2 51.63 F7.2 51.63 F7.2 F7.	
ME DATE Columns 1-7 8-14 15-21 22-28 29-35 36-42 43-49 50-56 57-63 64-70	
TRANSMISSION TIME DATE Equipology Equi	
N	
OWN TRAN B B B B B B B B B B B B B B B B B B B	
T/F UP TO M/F DOWN TRU ID Parameter Unit: A TIM(1,1,4) minute C TIM(3,1,4) minute E TIM(5,1,4) minute F TIM(6,1,4) minute G TIM(7,1,4) minute G TIM(8,1,4) minute H TIM(8,1,4) minute I TIM(9,1,4) minute I TIM(9,1,4) minute I TIM(9,1,4) minute I TIM(10,1,4) minute K TIM(11,1,4) minute	

	- 1												Card: 77b
Card: 77b	L M N O P Q R S T S T U D P O R S S T P U D D D D D D D D D D D D D D D D D D	Description					Same type of data as entered on	<pre>Card 65b, except data are for T/F up to M/F down computers</pre>					NOTE: This card is always preceded by card 77a and followed by card 78a.
ME DATA	P P P P P P P P P P P P P P P P P P P	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	
IISSION TI	0 1	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
OWN TRANSP	M M	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
T/F UP TO M/F DOWN TRANSMISSION TIME DATA	123/05/07/0	Parameter	TIM(12,1,4)	TIM(13,1,4)	TIM(14,1,4)	TIM(15,1,4)	TIM(16,1,4)	TIM(17,1,4)	TIM(18,1,4)	TIM(19,1,4)	TIM(20,1,4)	TIM(21,1,4)	
1/1		ID	_	Σ	z	0	۵	0	œ	S	-	n	

Card: 78a	A B C D E F G H I J K	Description					Company of data as contained	card 65a, except data are for	M/r up to m/r down computers				Ca	NOTE: This card is always preceded by :: card 77b and followed by card 78b.
DATA	E F	Columns	()	8-14	15-21	22-28	29-35	36-42	43-49	95-09	57-63	64-70	J 77-17	NOTE:
TIME	D 25 27 20 22	CO	1-7	φ,	15	22	58	36	43	20	57	64	7	
TRANSMISSION TIME DATA	2 22 22 22 23 24	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
	B shorrstandsterr	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
M/F UP TO M/F DOWN	A 1 2 3 4 5 6 7	Parameter	TIM(1,2,4)	TIM(2,2,4)	TIM(3,2,4)	TIM(4,2,4)	TIM(5,2,4)	TIM(6,2,4)	TIM(7,2,4)	TIM(8,2,4)	TIM(9,2,4)	TIM(10,2,4)	TIM(11,2,4)	
M/F		ID	A	8	S	0	ш	ш	5	Ξ	н	2	×	

		T											Card:	78b	
Card: 78b	Q R S T U S TABLE STATE	Description					Same type of data as entered on	A/F up to M/F down computers					NOTE: This card is always preceded by card 78a and followed by card 79a.		
ME DATA	प्रकार अस्ति व्यक्तिय	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70			
TRANSMISSION TIME DATA	N Q Q N N O N O N N N N N N N N N N N N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
1	N Spendantant	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
M/F UP TO M/F DOWN	L 2 3/4 5 6/2 (0 9/01) 12	Parameter	TIM(12,2,4)	TIM(13,2,4)	TIM(14,2,4)	TIM(15,2,4)	TIM(16,2,4)	TIM(17,2,4)	TIM(18,2,4)	TIM(19,2,4)	TIM(20,2,4)	TIM(21,2,4)			
M		ID	۔	Σ	z	0	۵	0	œ	S	-	_			

								ation.					Ca	rd: 79a
Card: 79a	A B C D E F G H I I J K	Description					as beautiful or stab to south sms?	card 65a, except data are for	I) I down to myr down computers					NOTE: This card is always preceded by card 78b and followed by card 79b.
	3427 38 34		_					_					_	Car
TIME DATA	E 27 20 29 30[31 32 33[34 35	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70	71-77	
SMISSION	C D	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	
DOWN TRAN	B spendusensku	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	
T/F DOWN TO M/F DOWN TRANSMISSION TIME DATA	A 123/65 9710	Parameter	TIM(1,3,4)	TIM(2,3,4)	TIM(3,3,4)	TIM(4,3,4)	TIM(5,3,4)	TIM(6,3,4)	TIM(7,3,4)	TIM(8,3,4)	TIM(9,3,4)	TIM(10,3,4)	TIM(11,3,4)	
1	1	ID	A	В	၁	0	ш	ш	5	I	-	2	×	

1	T/F DOWN TO M/F DOWN TRANSMISSION TIME DATA	F DOWN TRAN	ISMISSION	TIME DATA	Card: 79b
	7	M M M sight is a sight is	0 1	d character at a substitute a	D T S S S S S S S S S S S S S S S S S S
ID	Para	Units	Format	Columns	Description
1	L TIM(12,3,4)	minutes	F7.2	1-7	
Σ	TIM(13,3,4)	minutes	F7.2	8-14	
Z	TIM(14,3,4)	minutes	F7.2	15-21	
0	TIM(15,3,4)	minutes	F7.2	22-28	
۵	TIM(16,3,4)	minutes	F7.2	29-35	Same type of data as entered on
0	TIM(17,3,4)	minutes	F7.2	36-42	T/F up to M/F down computers
~	TIM(18,3,4)	minutes	F7.2	43-49	
S	TIM(19,3,4)	minutes	F7.2	99-09	
-	TIM(20,3,4)	minutes	F7.2	57-63	
_	TIM(21,3,4)	minutes	F7.2	64-70	
					NOTE: This card is always preceded by card 79a and followed by card 80a.

A Card: 80a	A B C D E F G H I J K K I I S of I I S of I I S of I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I J K K K I I I I	Description					7 Total 2 Total 2	card 65a, except data are for	M/F down to M/F down computers				Ca	NOTE: This card is always preceded by card 79b and followed by card 80b.	80a	
TIME DAT	E 27/201 29 30/31 32 33/3	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	20-56	57-63	64-70	71-77			
ISMISSION	C D D September 20 2425 2	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2			
- DOWN TRANSMISSION TIME DATA	B s s he n ratio setstern	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes			
M/F DOWN TO M/F	A 1 2 3 4 5 6 7	Parameter	TIM(1,4,4)	TIM(2,4,4)	TIM(3,4,4)	TIM(4,4,4)	TIM(5,4,4)	TIM(6,4,4)	TIM(7,4,4)	TIM(8,4,4)	TIM(9,4,4)	TIM(10,4,4)	TIM(11,4,4)			
M/F		10	A	В	ပ	0	ш	ц	5	I	н	7	×			

													Card:	80b
4 Card: 80b	L M N O P Q R S S S 1 1 8 9 P O R R S D D D R S S S T D D D D D D D D D D D D D D D D	Description					Same type of data as entered on	M/F down to M/F down computers					NOTE: This card is always preceded by card 80a and followed by card 81.	
TIME DATA	p parameter super	Columns	1-7	8-14	15-21	22-28	29-35	36-42	43-49	99-09	57-63	64-70		
N TRANSMISSION TIME DATA	N 0 N	Format	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2	F7.2		
MOD	M spenskansken	Units	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes	minutes		
DOWN TO M/F	12345678	Parameter	TIM(12,4,4)	TIM(13,4,4)	TIM(14,4,4)	TIM(15,4,4)	TIM(16,4,4)	TIM(17,4,4)	TIM(18,4,4)	TIM(19,4,4)	TIM(20,4,4)	TIM(21,4,4)		
M/F DO														

d: 83	Card: 81
1. 16. SQUIPMENT FAILURES The columns of the colum	lure is c, thereby augmented
Number of FDC equipment failures +	NOTE: A dummy equipment failure is required by the program logic, thereby actual equipment failures be augmented
EAILURES Format Columns 15 7-5	NOTE: A required necessita actual eq by l.
NUMBER OF FDC EQUIPMENT FAILURES D Parameter Units Format NFAIL 15	
3-169	

П								Card: 82
Card: 82	ति । जो व व को व व को व व को व को स्थान स्यान स्थान स	Description	Number of FDC at which i th failure occurred	Time at which i th failure occurred	Time at which repair of i th failure is completed	Type of i th failure	Time duration of i th failure	NOTE: As many as 13 cards of this type may be required; one for each of up to 12 failures, plus a dummy failure card required for program logic.
-	ी स्ट्राह्म स्ट्राम्ब्रीय	Columns	1-8	9-16	17-24	25-32	33-40	
TA	U	Format	F8.2	F8.2	F8.2	F8.2	F8.2	
FAILURE DA	Spenistra state	Units		minutes	minutes	1	minutes	
FDC EQUIPMENT FAILURE DATA	1234561	Parameter	RAMIN(I,1)	RAMIN(1,2)	RAMIN(1,3)	RAMIN(I,4)	RAMIN(I,5)	
		ID	A	8	ပ	0	ш	

I cond.	02
APONS SYSTEMS ORDERING Marter Units Format Columns ER(1) 110 1-10 Fire missions. Working from right to left, fire asystem to be tried next for counterbattery fire system to be tried next for counterbattery fire system to be tried next for counterbattery fire the system to be tried next for counterbattery fire system to be tried next for counterbattery fire system to be tried next for counterbattery fire this card always follows the last type second. It is followed by from one to eight the span in the stands.	83
Columns 1-10	
In State of	
SYSTEMS ORDERING B	
M S S	
IO IO IO	

T			p	Ð	Card: 84
100	अत्य स्था स्थापन स्यापन स्थापन	Description	Number of the 1st Red battalion that is equipped with i th weapons system type	Total number of Red battalions that are equipped with i th weapons system type	NOTE: Maximum number of cards of this type is eight. The first card of this type is always preceded by card 83, and the last card of this type is always followed by the first type 85 card.
	The range to the	Columns	1-10	11-20	
2131613	A sabatatatatata	Format	F10.4	F10.4	
	B • • • • • • • • • • • • • • • • • • •	Units	! !	1	
מבס מעווערומו ארעו מוס	123/es 6/21	Parameter	REDECH(1,1)	REDECH(1,2)	
-		10	A	æ	

Card: 85	A B C D E F G F a spein retraceller i nete rateller rate is ra	Description	Battalion ID (as a Blue target on target tape) of the i th Red battalion	Number of batteries or fire units in the Red battalion	Number of tubes per Red battery at start of game	Red battalion weapons system number	Index number of first battery in this Red battalion	Not used at the present time; leave blank	Echelon key (= 1.0, regimental artillery; =2.0, Division artillery; =3.0, Army artillery)	NOTE: Each card of this type is followed by sets of card type 86 and card type 87. Reading of this type card and card types 86 and 87 is terminated when a value of 9999. is entered in columns 1-10 of this type card. The number of type 86 cards that are required for each card of this type depends upon the value entered in columns 11-20 of this card type.
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	Columns	1-10	11-20	21-30	31-40	41-50	51-60	01-70	
	C 2425 22 2425 24	Format	F10.4	F10.4	F10.4	F10.4	F10.4	F10.4	F10.4	
ATA	B Branchinger	Units	-	1	1	1	1	1	1	
BATTALION DATA	1 2 3 4 5 617	Parameter	REDBN(I,1)	REDBN(I,2)	REDBN(I,3)	REDBN(I,4)	REDBN(I,5)	REDBN(I,6)	REDBN(1,7)	
RED		ΟI	А	ω	ပ	0	ш	LL_	5	

Card: 86	B C D E F G H 13 H 18pt 21 H B 22 H 22 S S S S S S S S S S S S S S S S	Description	Red battalion number to which k th battery belongs	Number of tubes up in k th battery	Time that k th battery can begin next mission	k th battery's current site number	Fractional personnel survivors in this Red battalion When this drops below DL, the specified defeat level this value is set to 100000	k th battery's ID number (as a Blue target)	Number of rounds fired by k th battery up to present	Number of sites for k th battery during game (maximum value of 6)	card type 85 is determined from the value entered in columns 11-20 of card type 85. Each type 86 card is followed by up to 6 type 87 cards, the number of type 87 cards being determined by the value entered in columns 71-80 of a type 86 card.
	O characters and a	Columns	1-10	11-20	21-30	31-40	41-50	21-60	02-19	71-80	
	C C	Format	F10.4	F10.4	F10.4	F10.4	F10.4	F10.4	F10.4	F10.4	
ATA	B sheiridinersheir	Units	1	1	minutes	!		;	-	1	
RED BATTERY DATA	A 1 2 3 4 5 6 7 8 9 10 11 12	Parameter	REDBAT(K,1)	REDBAT(K,2)	REDBAT(K,3)	REDBAT(K,4)	REDBAT(K,5)	REDBAT(K,6)	REDBAT(K,7)	REDBAT(K,8)	
0	1	ID	A	В	ပ	0	ш	ш	9	I	

Card: 87	14 65 14 15 14 15 14 15 14 15 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	ion	battery at its l th site	ed battery from its l th	attery's 1 th site	attery's l th site	this type are required ed. The number of cards termined by the value that card.	Card:	87
	A B C C C C D S of 2 a shahin ahis wishes mentance and so superson	Description	Time of arrival of k th Red battery at its l th site	Time of departure of k th Red battery from its l th site	x - coordinate of k th Red battery's l th site	y - coordinate of k th Red battery's l th site	NOTE: From 1 to 6 cards of this type are required for each type 86 card entered. The number of cards for each type 86 card is determined by the value entered in columns 71-80 of that card.		
	12 12 12 12 12 12 12 12 12 12 12 12 12 1	Columns	1-10	11-20	21-30	31-40			
	C Specializates as	Format	F10.4	F10.4	F10.4	F10.4			
TE DATA	B s sponnationspen	Units	minutes	minutes	kilometers	kilometers			
RED BATTERY SITE DAT	123/4547	Parameter	REDMOV (K,L,1)	REDMOV (K,L,2)	REDMOV (K,L,3)	REDMOV (K,L,4)			
REI		ID	Ä	ω	ပ	0			

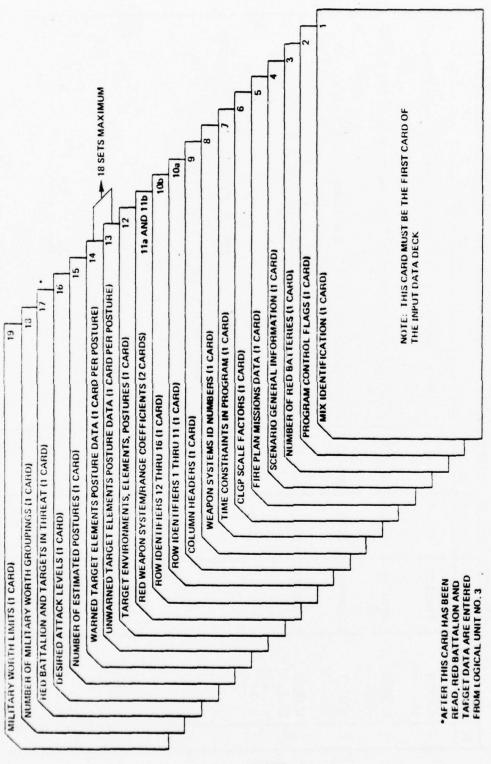


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 1 of 6).

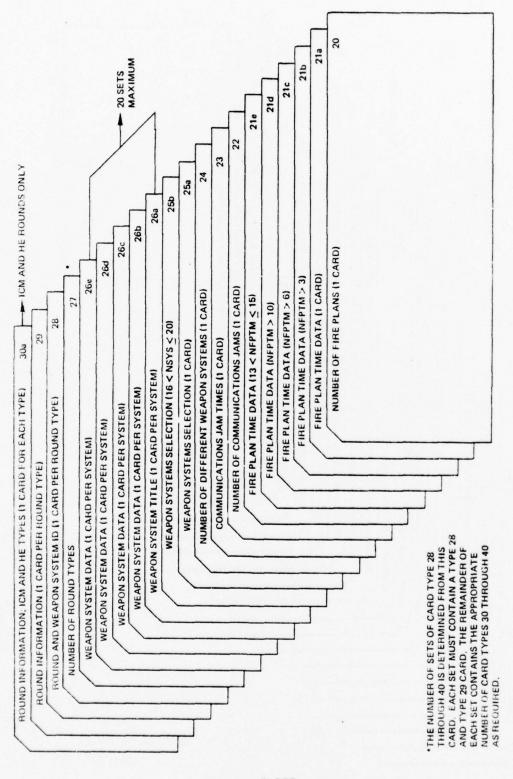


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 2 of 6).

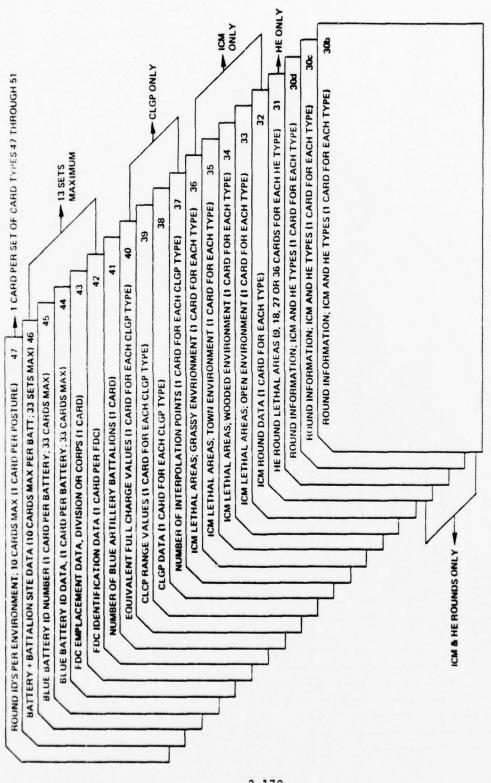


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 3 of 6).

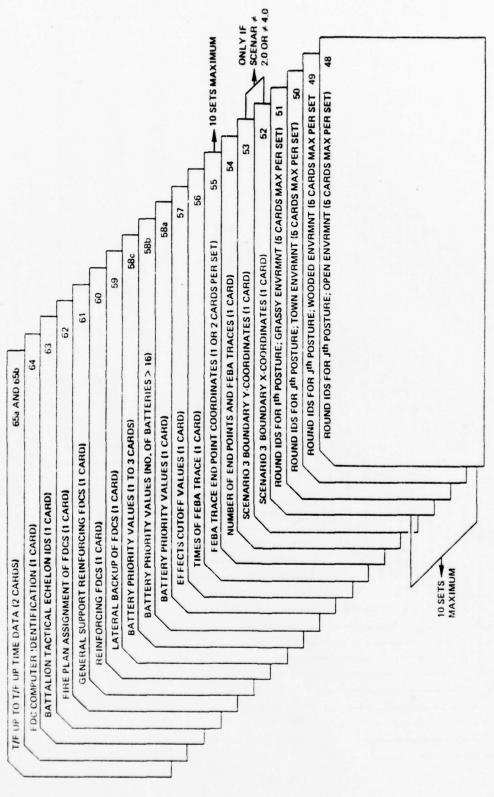


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 4 of 6).

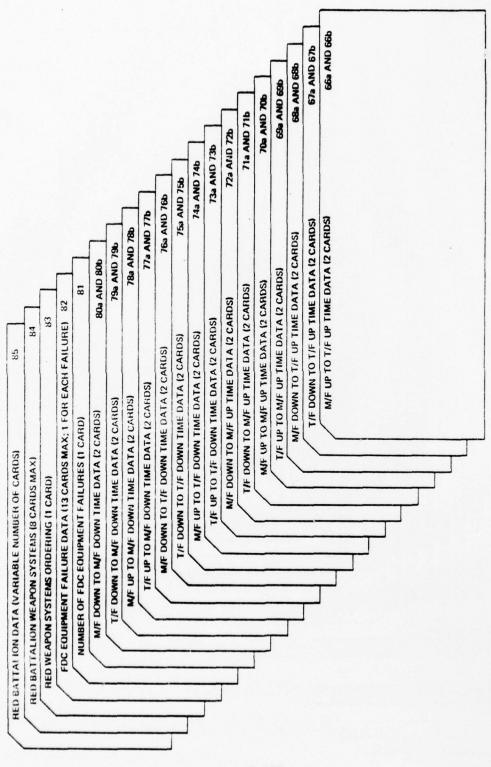


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 5 of 6).

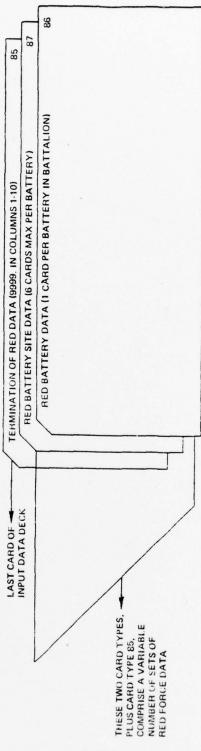


FIGURE 3-1. Typical AFSM Data Deck Setup (Page 6 of 6).

SECTION 4

OUTPUT

In this section the various types of hard copy output generated during execution of the AFSM Computer Program are discussed. Whenever reference is made to data card types, the reader should refer to Section 3 of this report for descriptions of the specified card types. Hard copy output, as generated during execution of each of the six input subroutines, is discussed first. A discussion of the scenario results at a specified game time is presented next. Finally, the status of individual target elements at the end of the game is presented and discussed.

Subroutine TABLES

Figure 4-1 contains typical hard copy output generated during execution of Subroutine TABLES. The first two lines are card images of parameter values contained on Data Card Types 2 and 3. The third line informs the reader that all data, entered by this subroutine, have been properly loaded into the program.

0.60 1.00 25.00 .30 1.00 4.00 0.00 ,

FIGURE 4-1. Subroutine TABLES Typical Hard Copy Output.

Subroutine SYSTEM

Figure 4-2 contains 34 lines of typical hard copy output generated during execution of Subroutine SYSTEM. The output consists of data taken from Data Card Types 26b through 26e. Each set represents one of the eight friendly weapon systems in the game. The next two lines are used to indicate the number of weapon systems being played and inform the reader that all data entered by this subroutine have been properly loaded into the program.

1230.33	6.33	6.00	4.30	23.00	1.30	30.00	8.00	2.00	1200.00
83.00	12.00	1.00	1.00	2.00	5.00	27.00	5.00	27.00	5.00
27.30	1530.00	800.00	2000.00	1400.00	1000.00	2000.40	4.00	5000.00	.05
.20	.40	.40							
3100.20	4.30	3.00	2.30	40.00	1.00	30.00	5.00	2.00	856.00
100.00	12.00	1.00	1	2.00	5.00	27.00	5.00		5.00
27.33	1530.00	1500.00	10300.33		1000.00			2500.00	. 05
. 3 u	.50	.20			•				
4000.20	2.00		.33	3.00	2.30	60.00	1.30	20.30	30.00
2.00	1.00	1.00	1.00	1.00		47.00	3.00		3.00
27.00	99.00	200.00	430.30		3000.00			99994.00	.20
	.15	. 80		300.00	300000		****		
5000.23	2.00	24.00	24.33	1030.00	3.00	25.00	12.00	15.00	90.30
14.33	12.30	1.00	12.33	1.00	3.00	27.00	3.00	27.33	3.00
27.00	600.00				4300.30			9999.00	.20
.13		.55	.0000.00	1000.00	4300.00	1000.30	0.00	,,,,,,	. 20
12033.23	1.00	1.00		1.00	2.00	40.00		10.00	10.00
6.31	5.00	30.00	0.30	1.00	0.33	0.00	0.00	20.00	10.00
								0.00	0.00
3.33	J.00	0.00	0.00	0.00	03	0.00	0.00	0.00	0.00
0.00	0.00	0.00							
13000.10	6.30	1.50	6.00	1.00	1.00	36.00	15.00	2.30	900.00
303.33	0.00	1.20	0.00	2.00	0.30	0.00	0.00	0.00	0.00
3.00	0.00	0.0.	0.33	0.13	00	0.30	0.00	0.40	0.00
0.00		0.00							
14000.20	6.03	43.00		43.03	2.00	16.00	1.00	20.00	240.00
720.60	0.00	. 90	0.00	1.00	u.00	0.00	0.00	0.00	6.00
0.00		0.00	0.03	0.00	0.30	0.00	0.00	0.00	0.00
1.33	0.00	0.00							
17000.30	6.00	2.00	8.00	1.33	1.70	18.00	15.00	2.00	500.00
403.00	0.00	1.10	0.00	2.00	0.00	U.00	0.00	0.00	0.40
3.03	0.00	3.00	0.00	3.30	6.00	U.0J	u.00	v.00	0.00
0.00	0.33	3.00							
8									
	SYSTEM	LOAULD PI	RUPERLY						

FIGURE 4-2. Subroutine SYSTEM Typical Hard Copy Output.

Subroutine ROUND

Figure 4-3 contains 16 lines of typical hard copy output generated during execution of Subroutine ROUND. The first line contains the value of the number of different type rounds to be entered as specified on Data Card Type 27. The next 13 lines contain values of the first seven values appearing on 13 Data Card Type 29. One round type does not appear because it is incompatible with all weapon systems entered into the program. The last two lines are used to specify that nine Blue round types are used in the current scenario and that all data, entered by this subroutine, have been properly loaded into the program.

14						
1201.3	81	.320	16.5	. 754	1.	1200.
1202.3	.081	.200	30.0	.750	2.	1200.
1203.3	.063	.115	17.3	. 983	2.	1200.
1204.3	.101	2.970	17.0	.953	3.	600.
31-1.2	.100	.453	23.3	. 750	1.	940.
3102.2	.150	.523	30.0	.956	2.	400.
3133.2	.130	.100	22.0	.980	2.	600.
4001.2	2.300	130.330	63.3	. 755	1.	30.
5001.2	.080	. 790	25.0	.953	1.	90.
12001.2	1.000	1.000	00.0	. 750	1.	10.
13331.1	1.303	1.000	30.0	. 970	2.	900.
14001.2	1.000	1.000	10.0	.980	2.	243.
17001.3	1.000	1.000	18.0	.950	2.	500.
4						
	LUNUL	LUAUED PRO	PERLY			

FIGURE 4-3. Subroutine ROUND Typical Hard Copy Output.

Subroutine FUFDC

Figure 4-4 consists of five pages of typical hard copy output generated during execution of Subroutine FUFDC. The first line on page one contains the value for the number of friendly battalions in the game taken from Data Card Type 41. The second line, illustrates two site locations and zero battalions for Divarty FDC, as entered from Data Card Type 42. The third and fourth lines contain arrival and departure times as well as x- and y-coordinates of the sites as entered from two Data Card Type 43.

Lines five through seven contain the same type of information for Group FDC. The remaining lines on page one, Figure 4-4, as well as pages two, three, and four, contain battalion FDC site information and battery site information for all friendly battalions and batteries in the game. Data are entered via proper combinations of Data Card Types 42, 44, 45 and 46. The last two lines on page four, Figure 4-4, are used to specify that 23 batteries and 10 FDCs in the friendly force have 100 tubes available at the start of the game.

Page five of Figure 4-4 contains values for the number of points (10) per FEBA trace, the number of FEBA traces, and the x- and y-coordinates of the points. These values are entered from Data Card Type 54 and 20 Data Card Type 55.

```
20.00 475.00
220.00 1700.00
20.00 3/0.00
                                                                                                                                                                  DIVARTY FOC
                                                                                              01.00
                                                                                                                                         61.00
                                                                                              14.00
                                                                                                                                                                  CORPS FOC
2 0.07 3/0.03 61.00 70.00
713.30 1700.03 54.00 62.00
7 1 8N FDC 8N1 XM1
0.03 160.00 62.00 72.43
143.33 270.03 61.63 71.73
400.03 240.03 36.53 71.73
400.03 240.03 56.33 71.23
990.00 1170.00 25.00 69.53
1120.00 1600.00 21.30 66.50
                                                                                                                                         XM155 DS
                                                                                                31.20
 1500.00 1030.00 5
384TFERYS IN BN
                                                                                                                                          66.13
                                                                             B BTRY BNL
                                        2
                                                                                                                                                                      XM155 DS
  1200.33
      140.00 270.00
140.00 270.00
300.00 270.00
610.00 270.00
990.00 1170.00
                                                                                                62.03
                                                                                                                                          72.43
                                                                                                                                                                                           4.00
                                                                                                                                                                                          4.00
                                                                                                                                         71.30
                                                                                                                                                                                    10.00
                                                                                               50.00
                                                                                                                                                                                          8.30
                                                                                                51.50
  1120.03 1480.03
                                                                                                                                          66.33
  1500.00 1630.00
                                                                                                                                          64.10
                                                                                                                                                                                           4.00
                                                                                           BIRY BNL
                                                                                                                                                                    1M155
120.33
160.00 250.63
280.03 573.60
243.53 900.03
930.50 1133.64
1480.03 163.03
                                                                                                63.20
                                                                                                                                          73.90
                                                                                                                                                                                           4.00
                                                                                                                                         73.40
73.00
72.80
71.00
70.00
                                                                                                 63.33
                                                                                                                                                                                           4.00
                                                                                               29.50
56.50
53.00
52.70
                                                                                                                                                                                    8.00
                                                                                                                                                                                         4.00
                                                                                                                                                                                          0.00
  1400.00 1030.00
                                                                                                                                          64.63
                                                                                                                                                                                           4.00
                                                                            C STRY SN1
  1200.30
       0.60 123.63
140.03 213.63
263.03 230.03
273.33 430.06
                                                                                                                                          74.93
74.50
74.30
                                                                                                01.50
                                                                                                                                                                                         4.00
                                                                                                                                                                                         8.00
                                                                                                                                                                                     13.00
773.33 930.00 61.00 7.963.35 1130.63 56.00 7.1100.03 144.00 7.1100.03 144.00 7.1100.03 144.00 7.1100.03 144.00 7.1100.03 144.00 7.1100.03 1100.03 67.20 67.20 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.23 67.2
                                                                                                                                                                                        8.00
                                                                                                                                          72.57
                                                                                                                                      71.50
71.40
2 xH155
                                                                                                                                                                                         4.60
                                                                                                                                         05.10
                                                                                                                                         64.63
                                                                                                                                          02.30
 1203.10
                                                                                                                                                                          XM150 DS
                                                                                                67.20
                                                                                                                                                                                          8.30
                                                                                                                                          66.60
130.03 293.00
273.33 433.33
423.30 710.03
743.30 1133...
                                                                                               07.00
00.50
60.10
02.00
61.70
                                                                                                                                         65.10
65.10
64.90
64.63
63.50
                                                                                                                                                                                   6.00
5.00
12.00
12.00
  1344.04 1630.00
                                                                                                76.70
```

FIGURE 4-4. Subroutine FUFDC Typical Hard Copy Output (Page 1 of 5).

```
A STRY BNZ
                                     XM152 DS
1233.30
 0.34 41.34
110.00 230.63
250.33 383.03
                      64.70
                               67.13
                     68.50
                               60.00
                                          6.00
                               05.61
                                          2.00
 430.00 690.01
                      07.60
                               05.40
                                          8.33
 723.50 1050.00
                     03.50
                               55.10
                                         12.00
1113.30 1243.33
                      63.20
                               65.00
1320.00 1530.00
                      50.00
                               54.00
                 C BTHY BNZ
                                     XM155 05
1200.30
 0.33 /3.33
90.33 213.33
233.03 363.03
                      70.20
                               60.00
                      70.00
                               63.10
                     57.50
                               56.10
                                          5.00
 300.00 670.00
                      64.10
                                          8.00
 700.00 1000.00
                      05.00
                               67.00
                                        12.00
1090.30 1273.00
                      64.70
                              06.10
                                         10.01
1300.00 1650.00
                      29.50
                               00.50
                 BN FOC BN3 XM
30 70.50 57.83
30 70.30 57.30
                                  XM155
   6
        3
                                           20
 370.03 613.03
 633.33
          643.03
                      64.80
                               57.10
  723.33 973.33
                      67.00
                               50.30
132U-UU 1630.00 65.60 1
132U-UU 1630.00 63.50 3
13AITERYS IN 8N 3
6 0 8 8TRY 3N3
                               55.70
                               35.70
                                     XM155 05
   3.33 333.33
                      70.00
                               27.83
                                          6.00
 370.00
          613.00
                      70.30
                               27.30
                                          3.00
 630.00 690.00
720.00 990.00
                      59.40
                               27.10
                      67.30
                               56.33
                                          5.03
1100.00 1240.00
                      60.50
                               55.73
                                          8.00
1320.33 1633.03
                      03.26
                               55.70
1200.31
   3.00 333.03
                      72.33
                               59.33
                                          6.33
  353.30 570.33
                      71.00
                               28.80
                                          5.00
 613.30 0/3.03
700.03 970.03
970.00 1273.00
                      11.30
                               23.63
                               57.50
                      94.50
                                          5.00
                               57.23
                      64.10
                                          8.00
1300.00 1530.00
                      00.00
                               57.23
                                          6.00
1200.30
             C BIRY BN3
   3.00 3.3.03
                      73.50
                               63.80
                                          6.40
  330.00 570.03
                      73.30
                               00.1)
 573.03 023.03
600.00 920.00
473.00 12.3.03
                      72.00
                               04.10
                      70.00
                               54.03
                                          5.00
                      07.60
                                          8.40
1296.00 1030.00
                      66.20
                               34.70
                                          4.00
 3 8N FCC 8N+

3 0.00 1/3.00 07.70 0

140.00 540.01 07.70 0

610.00 840.01 67.00 6
                                    S ME OT THISK PAESIN
                              01.83
                               07.30
                               67.10
                               06.00
0 CO.CEGI UU.UESI
                     62.50
                               54.50
                 8 STRY BN4
                                     MIZZA4 REAME TO SH Z
3100.20
          170.04
   1.30
                      57.70
                               67.80
                                         12.00
 19.00
          373.00
                      67.50
                               67.3.
                                         12.00
 610.00 896.00
                      67.40
                               67.13
                                         5.00
  913.00 1190.00
                      05.50
                               55.80
                                          5.00
1233.3. 1630.55
                      42.30
                               94.50
                                          4.40
```

FIGURE 4-4. Subroutine FUFDC Typical Hard Copy Output (Page 2 of 5).

```
MISSA4 REINF TO BN 2
3100.50
         0
                 A BTRY UN4
          190.00
 213.60
                     60.20
                               66.33
                                        12.00
          510.00
                                        5.00
                     60.00
                              65.43
 633.30
                     65.20
 933.00 1220.03
                     65.10
                               02.30
                                          5.00
                 C SIRY BN4
1220.00 1630.00
                               63.00
                                          8.30
                                     MIZZA4 REINF TO BN 2
   5
3100.20
   3.00 214.60
                     64.73
                               64.83
                               64.33
 230.00
          010.00
                     04.33
                                         12.40
                                         5.00
 650.00 930.00
                     64.00
 450.00 1240.00
                 0 63.00 6
0 24.50 5
BN FOC 8N2
                               61.60
                               51.50
1270.00 1035.00
                                    412344 GS4 TO 84 3
   0
250.00 523.33
973.33 1243.03
1250.00 1410.60
                     75.00
                     75.40
                               58.80
                     71.60
                              56.20
1443.33 1433.33 45.30 5
38ATTERYS IN 8N 5
6 8 BTRY BNS
                              36.33
                                     M123A4 GSR TO BN 3
3100.20
                              54.30
56.60
56.60
56.20
 250.63
         230.00
                     75.40
72.03
71.60
71.36
         520.00
                                          4.00
 970.00 1230.00
1250.00 1410.00
                                          6.03
1440.00 1930.00
                     66.33
                               66.43
                                          4.00
                                     MIZJA+ GSR TO BN 3
                 A STAY BAS
3100.23
                     74.10
73.90
70.20
70.10
                              57.33
55.03
54.70
 230.00
         213.00
                                          4.00
         600.00
                                          4.60
 630.00
                                          4.30
 920.00 1210.00
                                          4.00
                     64.80
                                         0.00
1233.53 1395.00
                               34.30
1420.00 1630.00
                               54.80
                                          6.00
                                    MIZZA4 GSR TO BN 3
                 C BINY BNS
   6
3100.20
                              30.33
53.30
53.50
53.20
   3.30
          190.63
                     72.60
 210.00
         560.00
                     72.40
                                          4.00
  590.04
  430.00 1190.00
                     60.60
                                          4.00
1210.0- 1376.60
                     68.30
                               2.40
                                          6.00
1400.00 1610.00
                     63.30
                               53.33 O.
                                          0.00
                 BN FOC BN6
                                                GS AT DIA
         3
         463.30
                              70.50
70.30
09.83
69.50
    0.00
                     60.63
 210.00
 830.60
  470.00 1190.00
                     30.50
                               61.00
1220.00 1430.00 55
1460.00 1630.00 53
                     53.70
                               66.70
                       6
                                               G. A! O/A
                  BIRY BNG
                                     FARSS
5333.23
 513.00
         140.00
                     60.63
                               70.00
                                          8.30
                                          6.40
         810.00
                               08.40
                                          8.00
                     59.70
56.50
55.50
 #30.00 740.60
970.00 1190.00
                              69.50
                                         5.00
1223.33 1430.00
                               06.20
                                        10.00
1400.00 1030.00
                     53.70
                               56.70
                                          4.00
```

FIGURE 4-4. Subroutine FUFDC Typical Hard Copy Output (Page 3 of 5).

THIS PAGE IS BEST QUALITY PRACTICALLY
FROM COLY FARMISHED TO DDC

```
5000.20
                   A BTRY BN6
                                        FARSS
                                                    GS AT DIA
    0.33 173.03
                       62.36
                                  72.40
                                              8.03
                                             6.00
  143.35 440.00
                                  71.30
                       62.10
463.JJ 740.00
410.00 420.03
490.00 117..03
1203.JJ 1410.00
1440.00 1630.00
                       01.50
                       61.20
                                             5.00
                                  71.00
                       38.00
                                  10.50
                                 08.00
                                            10.00
                       55.20
                                 58.20
                  C STAT 6N6
5000.20
                                        FARSS
                                                   S AT DIA
 0.00 150.00
170.00 420.00
440.00 770.00
                       63.84
                                  73.50
                                             8.42
                       63.60
                                  73.00
                                             6.00
                       63.10
                                  72.50
                                             4.00
793.30 433.03
730.03 1150.03
1160.03 1370.03
                                  72.50
                                             5.33
                                 72.00
                       54.50
                                             5.00
                                            10.03
                       26.23
1420.00 1030.00 55.70 60.70
5 3 8N FOC BN7
5.00 480.00 60.00 71.00
500.00 750.00 64.80 70.50
780.00 1120.00 54.30 72.50
                                              4.00
                                        M12344
                                                   GAR TO DIA FROM CORPS
1140.00 1310.00 54.00
1330.00 1630.00 53.70
36417ERYS IN BN 7
                                  72.30
                                 71.90
3100.2u

3100.2u

3.00 480.0u 65.0u 7

500.00 750.0u 64.80 7

780.00 120.00 54.50 7
                                        M123A4
                                                   GSR TO U/A FRUM CORPS
                                  71.00
                                             7.00
                                  70.50
                                            3.00
1143.03 1315.03
                                            7.00
                       54.30
                                  72.30
                      33.70
                                  11.90
                 A BIRY BN7
                                      M123A4
                                                     SSR TO U/A FRUM CORPS
763.00 1290.00
1123.00 1290.00
                                  59.53
                                             7.03
                       03.30
                                  71.00
                                           11.00
                                73.83
                       52.50
                                            7.30
1310.00 1330.00 52.20 7
5 0 C BIRY 3N7
3100.20
                                  73.40
                                        A12344
                                                     GIR TO DIA FROM CORPS
    U. LO 440.00
                       62.00
                                  60.00
                                              7.00
 463.00 713.00
740.00 1.50.03
                                  67.50
                       61.80
                       51.00
                                            11.00
1100.00 1270.00
                                  69.30
                                             4.60
                                  58.90
    1 2 BN FOC BNB
00.75 CC.CE 61 CO.O
                                     SPEAR
                                               GS AT CLRPS
                                  65.63
1 3 A STRY BNS
                                      SPEAR GS AT CORPS
   1 3 33.00
                                  00.00
                                             0.00
                       27.50
4000.20
                                               GS AT CURPS
                 S SIRY SAS
                                      SPEAR
    3.33 1633.03
                       65.00 25.03
                                              3.00
  23 10 FORS12 .
                           100.3
```

FIGURE 4-4. Subroutine FUFDC Typical Hard Copy Output (Page 4 of 5).

69.00							
04.00	77.03	73.30	74.00	74.00	71.00	76.00	66.00
79.00	62.40	80.30	24.00	74.30	50.00	79.00	53.00
60.00	77.00	64.00	74.00	71.30	71.00	73.00	68.30
76.00	62.43	77.00	54.60	74.00	56.00	79.00	53.00
04.30	77.00	67.00	74.63	70.30	71.00	72.04	68.00
76.00	62.03	76.00	54.00	74. 40	\$6.00	79.34	53.00
64.03	77.40	66.33	74.00	70.30	71.00	71.60	68.00
75.00	62.00	75.00	59.00	79.03	56.00	79.00	53.00
		66.00	74.60	70.00	71.06	71.00	68.00
							53.00
							68.40
			59.00	72.00	56.00	75.00	53.00
			74.00	64.00	71.00	70.00	60.00
73.33	02.30		94.C.	72.00	56.30	75.00	23.23
62.30	17.60		74.04	61.00	71.0-	42.00	68.30
72.00	62.43		59.43	73.00	36.74	75.00	53.00
61.40	77.00		74.00	29.30	71.00	01.20	68.30
74.00	62.60	11.00	34.03	72.30	26.40	75.40	>3.00
			74.00	38.00	71.00	24.00	55.00
	The second second	70.03	59.04	71.33	26.00	15.00	53.00
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FIGURE 4-4. Subroutine FUFDC Typical Hard Copy Output (Page 5 of 5).

Subroutine WPMIX

Figure 4-5 presents typical hard copy output generated during execution of Subroutine WPMIX. The first line is a card image of Data Card Type 57 and the second line is the value for the number of friendly battalions in the game. Lines three and four contain priority values for the 23 friendly batteries taken from Data Card Types 58a and 58b. These lines are followed by four lines of values of placement numbers for 1) lateral backup of FDCs, 2) reinforcing FDCs, 3) general support reinforcing FDCs, and 4) fire plan assignment of FDCs. These values are entered from Data Card Types 59 through 62 respectively. The next line is a card image of tactical echelon identification numbers that appear on Data Card Type 63.

The next 23 lines contain values computed from Data Card Type 26d information for each weapon system entered during execution of Subroutine SYSTEM. The eight columns of 23 lines contain the following information:

Column 1 - fire unit number

Column 2 - randomized number of equivalent full charge rounds fired toward next short-term tube failure

Column 3 - randomized number of equivalent full charge rounds fired toward next long-term tube failure

Column 4 - randomized number of equivalent full charge rounds fired toward next permanent tube failure

Column 5 - randomized number of EFC rounds fired toward next tube change

Column 6 - randomized number of kilometers traveled toward next short-term mobility failure

Column 7 - randomized number of kilometers traveled toward next long-term mobility failure

Column 8 - randomized number of kilometers traveled toward next permanent mobility failure

Lines 33 through 37 are ordering values for as many as 14 friendly battalions based upon battalion tactical echelon identification numbers and these values are computed during execution of this subroutine. These lines are followed by a card image of Data Card Type 64 which contains values identifying the type of computer at each of the 10 FDCs in the game.

The following 32 lines are card images of Data Card Types 65a through 80b which contain transmission times and processing time values for various missions and operative status of computers. The last two lines, card images of Data Card Types 81 and 82, contain data concerning FDC equipment failures and are the last two lines of hard copy output generated during execution of Subroutine WPMIX.

	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
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		80.		45.		526.		10.		764.		07.		323.
		74.		503.		316. 135.		162.		413.		14.		235.
		12.		721.		767.		42.		426.		67.		161.
		.32.		456.		1770.		74.		200.		44.		504.
		134.		462.		1704.		82.		443.		72.	_	346.
		97.		176.		1216.		91.		721.		69.		146.
		72.		444.		6925.		176.		824.		79. 70.		997. 580.
		47.		457.		19/0.		91.		804.		50.		793.
		39.		974.		520.		86.		117.)	50.	4	984.
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		47.		373.		2244.	3	109.		284.		36.		123.
		23.	4	005.		5877.		0.		219.		44.		642.
		33.	3	458.		7229.		0.		297.		45.		789.
		222.		760.		2464.	2	210.		940.		17.		767.
		200.		2/2.		1672.		95.		950.		11.		312.
	1.	52.	1	312.		325.		554. 559.		187.		59. 38.		941.
		68.		145.		54.		240.		151.		03.		606.
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33		. 33	1.25	1.4	7	1.40	1.00	,	4.00	4.00	4.3		1.31	1.31
02		. 65	13.00			.65	.50	9	.24	. 27	2.0	2	.73	
13		.27	5.33			1.00	. 2:		.00	.60	1.0	7	.38	.25
30		.33	1.45			1.45	1.0		4.33	4.00	4.0		1.31	1.31
65	1	.03	13.43	2.3	3	. 65		5	.24	. 55	2.0	2	.73	
23		.27	1.00			1.20	• 7		.60	. 53	5		. 25	.25
33		.33	1.25			1.45	1.00		4.30	4.00	1.0		1.3.	1.31
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28		. 47		1.0	7	1.00	. 55	5	. 50	. 50	.6	J	. 25	.25
3 4		.33	5.33			.25	. 2 .		.24	.14	1.0		. 39	
65		. 33	13.00			1.45	1.30		4.33	4.30	2.0		1.31	1.31
62		. 27	1.00			1.23	.7.		.63	.60	2.0		. 25	.22
34		. 33	5.50			.25	. 26	3	.24	,34	1.0	7	. 35	
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55		.02	13.00			.05	.5.		.24	.55	5.0		.73	••
33		.27	3.00			1.00	. 5		.63	.14	1.0		.25	.25
00		. 33	1.25			1.45	1.00		4.30	4.5.	4.0		1.31	1.31
05		. 35	13.00			. 05	.50		.24	.30	2.0		.73	
23		.27	1.00	1.2	7	1.20	. 75	5	.60	. 53	. 5	٥	.20	.25
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00		. 33	1.25	1.4	7	1.45	1.00	3	4.30	4.00	4.0	•	1.31	1.31

FIGURE 4-5. Subroutine WPMIX Typical Hard Copy Output.

Subroutine REDIN

Figure 4-6 presents typical hard copy output generated during execution of Subroutine REDIN. The first line is used to specify the number of enemy systems in the game. This information, followed by a card image of Data Card Type 83, is used to specify Red weapon system ordering for counterbattery fire missions.

The next four lines contain three values each, one line for each enemy system in the game. The first two values on each line are entered from Data Card Type 84 and the last value is used to specify the round ordering number for the system. The remaining lines represent Red battalion data taken from Data Card Type 85. One card represents each battalion. The fourth value on each line has been incremented by the number of different type Blue weapon systems in the game and places the Red battalion weapons systems in proper order for counterbattery fire missions. The last line, which contains 9999.0000 as its first value, is used to indicate that all data cards have been entered into the program.

4						
1432	4136					
1.0000	1.0600	10.0000				
2.3000	2.0040	11.0000				
4.3333	1.3333	12.4400				
5.0004	12.0000	13.0000				
755.6000	4. 4043	1.0003	5.0003	1.0000	0.0000	. 2.0030
431.0000	3.0000	6.0000	6.0300	3.0300	0.00-0	1.0000
902.0000	3.4000	6.0000	4.4300	4.0000	0.0000	1.0000
763.2333	3.0000	6.0000	7.0000	11.6000	0.3000	2.0000
753.0000	3.2000	6.3333	8.0000	14.0000	0.000	1.0040
841.2002	3.30.0	6.0000	8.0000	17.0000	4.0000	1.0000
9-3.6000	3.0000	6.0333	8.2002	20.0000	0.0000	2.0000
924.2022	3.0000	6.0335		23.0000		
745.0000	1.0000		4. 3303		0.0030	2.6000
		0.3.00	0.0000	20.000	0.0000	1.0000
715.5000	1.0000	6.3000	9.0000	27.6505	0.0000	1.0600
725.0000	1.0000	6.0000	4.0000	28.0000	0.0320	1.0000
751.0103	3.3300	6.0000	6.0000	29.0000	0.0000	1.0000
152.3033	3.0000	6.000.	8.0000	32.0330	0.0000	1.0000
436.0333	1.3300	6.0000	8.0000	35.03.0	3.0306	1,4430
841.0333	3.0000	0.0000	8.03.3	30.6060	0.0400	1.0000
542.0303	3.0000	6.0430	6.0000	39.0000	0.4030	1.0030
4949.3333	0.0000	0.0000	4.0000	0.6260	0.0000	6.6000

FIGURE 4-6. Subroutine REDIN Typical Hard Copy Output.

SCENARIO RESULTS

Hard copy output is generated during execution of Subroutine OUTPUT at the end of each hour of game time. Figure 4-7, consisting of five pages, contains scenario results after 27 hours of game time. A discussion of these results, page by page, is presented in the paragraphs that follow.

Page 1 of 5

The first line of hard copy output is used to specify that the results are for the 27th hour of the game: the scenario is a sample case. This is followed by title and column headings for the friendly battalions and an overall total column. With only eight friendly battalions in the scenario, the columns for battalions 9 through 11 contain zero values. The next nine lines of print contain the following information:

- 1. Military worth of Red targets attrited by artillery fire
- 2. Number of Red personnel attrited by artillery fire
- 3. Number of Red tanks attrited by artillery fire
- 4. Number of Red APCs attrited by artillery fire 5. Number of Red trucks attrited by artillery fire
- 6. Number of Red artillery tubes attrited by artillery fire
- 7. Number of Red radar systems attrited by artillery fire
- Number of Red antiaircraft missile launchers attrited by artillery fire
- 9. Number of battery fire missions completed

The next set of data identifies the number of defeated Blue batteries up through the current game time. These data are followed by values for the number of rounds fired by each battalion, and the total number of rounds fired for each of the nine round types in the Blue force. A summary of total rounds fired by each battalion, total rounds fired, total weight in metric tons of rounds fired, and total cost in kilodollars, is presented. The remaining information pertains to CLGP results, and to unaccomplished fire missions. The results are self-explanatory.

Page 2 of 5

The first set of data pertains to the number of fire missions, the number of defeated missions, and the artillery military worth of the defeated missions for observed, non-observed, and fire plan missions at four military worth ranges. The totals for the four military worth ranges appear in the last column of each line. The next set of data, on page two, pertains to fire plan missions; the printed output is self-explanatory and no discussion is required.

The third set of data presents time summations for 10 FDCs and 23 batteries of the Blue force. The row and column headings for this set of data preclude the necessity for any discussion of the output (% busy is for most recent hour only; busy time and idle time are cumulative). The last set of information pertains to rounds fired at each of 30 range values in one kilometer increments. After the column heading, information for each different round type appears in a set of three lines. The first

line identifies the round type and the number of rounds fired at the indicated battery to target ranges. The second line again contains the round type and the number of rounds fired at the indicated FEBA to target ranges. The last line of the set contains the total number of rounds of this type that were fired. There are four sets of this type of information for four different round types appearing on this page.

Page 3 of 5

The first 15 lines are five sets of data, three lines each, containing round/range data for the five remaining round types in the Blue force. Next there are title and column headings for systems with ranges greater than 30 kilometers. For the sample problem scenario, no systems of this type exist, consequently no data of this type appears on the hard copy output.

The last set of data appearing on this page contains reliability/ attrition information. Values are clearly identified and no discussion of the printed output is required (read by Blue battery, Battery 1 first in each row, Battery 2 second, etc.).

Page 4 of 5

This page contains the data breakdown for up to 11 system types in the Blue force plus a summary of systems with a common caliber. The column headings identify the 11 possible systems that can be played in a scenario. Each column contains the following information:

- 1. Military worth of Red targets attrited
- 2. Number of Red personnel attrited
- 3. Number of Red armor (tanks and APCs) attrited
- 4. Number of Red trucks attrited
- 5. Number of Red artillery tubes attrited
- 6. Number of Red radars attrited
- 7. Number of Red missile launchers attrited
- 8. Number of battery fire missions completed by system type
- 9. Number of rounds fired by system type
- 10. Weight in metric tons of rounds fired
- 11. Cost in kilo-dollars of rounds fired
- 12. Number of incoming fires received by system type
- 13. Number of tubes out due to attrition
- 14. Number of tubes out due to RAM
- 15. Number of tubes up at present time
- 16. Average fractional value of original number of tubes available at present time

The last three lines appearing on this page contain values of military worth hours, average force availability, and hourly force availability respectively.

Page 5 of 5

The last page of Figure 4-7 contains the breakdown for General Support Rocket Systems in the Blue force. For the sample problem, only Battalion #6 was equipped with GSRS and therefore its data values and the total data values are identical. The column headings clearly identify the data appearing therein and no further discussion of output is required.

INDIVIDUAL RED TARGET DATA

At the end of the game, values of the two-dimensional DAMG array and a damage level flag are printed. Figure 4-8 is a typical hard copy output of part of the data. The following information appears in each line of output:

- 1. Individual Red target element ID number
- 2. Fractional value of personnel survivors after artillery fire
- 3. Fractional value of tank survivors after artillery fire
- 4. Fractional value of APC survivors after artillery fire
- 5. Fractional value of truck survivors after artillery fire
- Fractional value of artillery tube survivors after artillery fire
- 7. Fractional value of radar survivors after artillery fire
- 8. Fractional value of missile launcher survivors after artillery
- 9. Original number of personnel in target
- 10. Original number of tanks in target
- 11. Original number of APCs in target
- 12. Original number of trucks in target
- 13. Original number of artillery tubes in target
- 14. Original number of radar systems in target
- 15. Original number of missile launchers in target
- 16. 0.0 changes to 2.0 when cumulative damage from non-artillery and artillery fire results in critical target element damage greater than specified defeat level, i.e., a defeated target
- 17. Number of platoons in target

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		TOTAL	14869.96	117.12	178.19	158.85	22.73	1.15	1.54	574				6614.00	46.00	34.00	670.00	1741.00	12.00	0.00	24.00	9393.00	806.76	\$207.51										
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FIGURE 4-7. Typical Hard Copy Output of Scenario Results (Page 1 of 5).

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FIGURE 4-7. Typical Hard Copy Output of Scenario Results (Page 2 of 5).

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FIGURE 4-7. Typical Hard Copy Output of Scenario Results (Page 3 of 5).

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0004	00.0	0.00	0.0	0.00	0.00	00.0	00.00	00.0	0.00	0.00	0.00	0.00	00.0	0.00	•••	1.00	
3100	3650.28	44.47	22.46	65.89	12.73	00.0	0.00	137.00	1753.00	175.30	785.61	16.00	0.00	2.00	36.00		
2000	0.00	0.00	0.00		0.00					0.00	0.00	0.00	0.00	0.00	0.00	00.0	
1500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	
348		0.00	0.00	• .00	0.00	• •	9.00	0.00	.0	9.00	0.00	0.00	8.0	•	0.00	8.0	
1300	0.0	0.00	0.00	• •	0.00	•••	8	0.00	•	• .00	0.00	0.00	0.0	0.00	0.0	0.00	
1280	11177.46	1053.19	272.32	93.20	9.40	1.15	.54	436.06	7616.00	95.629	4398.14	92.00	9.00	14.00	41.00	•	
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002	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
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MILITARY WORTH HOURS - 262310.11

AVERAGE FORCE AVAILABILITY . . 9226

HUURLY FORCE AVAILABILITY - . 970

FIGURE 4-7. Typical Hard Copy Output of Scenario Results (Page 4 of 5).

	474	0.000	0.000	1.000	0.00	0.00	00000	0.000	0.000	1.000
	1507 83	0.000	00000	23.760	00000	0.000	0.000	0.000	0.00	23.760
	•	00000	00000	1.920	0.000	0.000	000.0	0.000	000.0	1.920
	PIKES KD	.000	0.000	24.000	0.00	0.000	000-	0.000	0.000	24.000
	INCHES ROS FIRED	00000	0000	0.00	0.000	0.000	000.0	0.00	000.0	0000
	KADAKS	0.000	0.000	0.00	0.000	0.000	0.000	0.000	00000	0.000
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	RUCKS	0.000	00000	2.764	0.000	00000	00000	0.000	000.0	2.764
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GSRS BREAKDOWN	TARKS	0.000	0.003	0.000	0.000	0.000	0,000	0.000	0.000	0.000
	3		0.00	30.984	0.000	0.00	000 0	0.000	00000	30.984
	HIA 114	00000	00000	42.239	000.0	000.0	00000	00000	00000	42.239
		4 X 8	8 N	8N 6		8 × 8		BNIO	BN11	TOTAL
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FIGURE 4-7. Typical Hard Copy Output of Scenario Results (Page 5 of 5).

- 18. ID number for type of critical element
 - = 1.0, personnel

 - = 2.0, tanks = 3.0, APCs = 4.0, trucks = 5.0, artillery tubes
 - = 6.0, radar systems
 - = 7.0, missile launchers
- 19. Artillery damage level ID number

 - = 1, 50.0% or more killed = 2, 40.0% to 49.9% killed = 3, 30.0% to 39.9% killed = 4, 20.0% to 29.9% killed

 - = 5, 10.0% to 19.9% killed
 - = 6, up to 9.9% killed

The last three lines of printed output contain values for the number of Red targets at each of the six damage levels, the number of Red platoons at each damage level, and the total number of individual Red target units damaged (both as units and as equivalent no. of platoons).

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0.0	0.0				0.0	0.0	0.0	0.0	0			0	0.0			0.0	0.0				0.0	0.0	3.0				0.0	•	0.0	0.0			0.0	0.0	0.0	0.0		•	0	0.0	0	0.0	0.0				•	0.0	0.0	0.0	0.0	0.0	0	0.0				0	0.0	0.0	0.0				0.0	0.0	0.0	0.0	21.000		20.50
0.0	0.0				0.0	0.0	0.0	0.0	0			0.0	0.0			0.0	0.9				•	0.0	0.0	4		•	0.0	0.9	0.9	0.0			0.0	0.0	0.0	0.0		:		3.0	0.0	0.0	0.0				•	0.9	0.9	0.0	0.0	0	0.0	0.0	0				0.0	0.0	0.0	3.0			•	0,0	0.0	0.0	12.000		2000-
13.0	1.0			1.0	4.0	0.0	1.0	0.0				0	0.0			0	5.0			0.0	15.0	2.0	0.0				2.0	0.0	2.0	1.0			0.1	0	1.0	0.0				0.4	0.0	0.0	0.0	•			2.0	2.0	2.0	2.0	2.0	2.0	0.0	2.0	0			2.0	0.0	0.0	0.0	4.0			0	0.0	0.0	0.0	300		113.000 2
0.0	0.0			0	0.2	0.0	0.0	0.0				0	0.0			0.0	2.0			2.0	0.0	1.0	0.9			73.0	2.0	5.0	2.0	0			0.0	0.0	0.0	0.0			2	7.0	10.0	10.0	10.0				2.0	5.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	10.0	10.0	1.0		1	0.	2.0	1.0	16.0	63		113
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59.0	44.0			44.0	39.0	12.0	20.0	12.0			0.00	12.0	12.0		0.00	12.0	55.0			000	41.0	8.0	15.0			2.50	55.0	55.0	55.0	24.0		0.00	26.0	16.0	24.0	16.0		200	0.77	55.0	0.701	107.0	107.0	22.0		0.22	22.0	55.0	55.0	45.0	45.0	45.0	12.0	21.0	12.0		2000	0.17	15.0	107.0	107.0	22.0		0.33	2	18.0	21.0	0.00		. 4 . 0	1
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.926	613	610	. 236	. 685	.587	.404	.735	444			. 163	614.	335	307	.432	.335	1867			.854	. 716	.375	000	9 9 9		2750	.864	.872	400.	205		00.	865.	.240	.299	2540	41.4	010	0.7.	. 964	8 76 .	000	000	000			. 875	.863	1985	_	~	1 668	_	578	.435	200	•		_		\$06·					.914	0000	546.			
.557		100.	~ * 0 .	.850	.435	.851	.642	851			140.	2400	.850		. 8 20	.850	625		0	_							. 389	.435	***	. 637			.457	.637	.637	.637	404			~	_		_			170.		_	•	0000	2000	0000	0000	0000	.670	000		-	0	_	. 804·		. ,		2	10	.000				
760.230	732 210	017.757	132.250	732.230	732.301	732.312	732.313	712 316		226.361	135.363	732.324	732.332	200000	(36.333	732.334	752.210	2000	022.261	752.230	152.401	752.435	205.210	200	033.601	057.50	841.210	841.220	841.230	704.210	200	000.50	704.230	704.312	704.313	704.314	107	101.00	166,142	122.343	713.210	713.220 1	713.230 1	713 342	212 312	5 + 5 - 5 - 5	642.210	842.220	842.230	740.210 1	740.220 1	740.230 1	740.312 1	740.313 1	740.314	740.322	770.01	140.363	140.324	702.210 1	702.230	732.342		200.000	104.201	703.402	145.210 1	745.220			

FIGURE 4-8. Typical Hard Copy Output of Individual Target Statuses at Game's End.

SECTION 5

SAMPLE PROBLEM

This section contains card image listings of the punched card input data entered during execution of each of six different input subroutines of the AFSM Computer Program. The different types of card input data are discussed in considerable detail in Section 3 of this report. The card image listings are followed by computer generated output of selected input parameters, scenario results after 9, 18, and 27 hours of game time and, finally, individual target statuses at the end of the game. The computer generated output is discussed in detail in Section 4 of this report.

SAMPLE PROBLEM CARD INPUT

Six different subroutines are used to enter punched card input data required for execution of the AFSM Computer Program. Figure 5-1 contains a card image listing of punched card data entered upon execution of Subroutine TABLES. The parameters are defined in descriptions of Data Card Types 1 through 23, Section 3.

Figure 5-2 contains a card image listing of Data Card Types 24 through 26e, entered during execution of Subroutine SYSTEM. The five pages of Figure 5-3 represent a card image listing of Data Card Types 27 through 40, entered during execution of Subroutine ROUND.

The card image listing for Data Card Types 41 through 56, entered during execution of Subroutine FUFDC, is presented in Figure 5-4. Figure 5-5 contains the card image listing for Data Card Types 57 through 82 as entered during execution of Subroutine WPMIX. The final card image listing for Data Card Types 83 through 87, entered during execution of Subroutine REDIN, is contained in Figure 5-6.

SAMPLE PROBLEM OUTPUT

The first printed output generated by the AFSM Computer Program contains values of selected input parameters entered during execution of the six input subroutines. The seven pages of values of selected input parameters are contained in Figure 5-7.

After the values of the selected input parameters are printed and if no errors cause a halt in program execution, scenario results are printed at the end of each hour of game time. Five pages are printed at the end of each hour and the results are cumulative as the game progresses. The sample problem is terminated after 27 hours of game time and the complete output is extensive.

In lieu of a complete output, scenario results are presented for game times of 9, 18 and 27 hours (end of game). Figures 5-8 through 5-10 contain the scenario results at the aforementioned game times.

At the end of the game, the status of each individual target element is printed. The status for each individual target element in the sample problem, is presented in Figure 5-11. This is the final type of output generated during execution of the AFSM Computer Program.

```
SAMPLE CASE
            1.00
    0.00
                   25.00
                             0.30
                                     1.00
                                              4.00
                                                      0.00
41
          1.0
                                   0.0
  0.0
                   0.0
                           4.0
                                            0.0
                                                    0.6
                                                            0.0
                                                                     0.0
                  0.0
                                           0.0
                                                    0.0
                                                                     0.0
  0.0
                           0.0
                                                            C.0
  0.0
          1.0
                                   0.0
                                                            0.6
                           0.0
                   1.0
                           0.0
                                                                     C.0
  0.0
          0.3
                                            0.0
                                                    6.0
                                                            0.0
  0.0
          0.0
                   1.0
                           0.0
                                            0.0
                                                    6.0
  0.0
                  1.0
          1.3
                           0.0
                                   0.0
                                            0.0
                                                    0.0
                                                            0.0
                                                                     0.0
          0.0
                           0.0
                                   6.0
                                            0.0
                                                    0.0
                                                            0.0
                                                                     0.3
  0.0
          0.0
                           1.0
                                                                     0.0
                   ·.0
                                            0.0
                                                    0.0
                                                             0.0
          4.0
                   0.0
                           1.0
                                   0.0
                                            0.0
                                                            0.0
                                                                     0.0
  0.0
                                            0.0
          0.0
                   0.0
                           0.0
                                   1.0
                                                    0.0
                                                            0.0
                                                                     0.0
  0.0
          0.0
                   0.0
                           0.0
                                            0.0
                                   1.0
                                                    U.0
                                                                     C. 0
  0.0
          0.0
                   0.0
                           0.0
                                   0.0
                                                    0.0
                                                                     0.6
                                            1.0
  0.0
          0.0
                   0.0
                           0.0
                                            1.0
                                                    0.0
                                                            0.0
                                                                     0.0
                           0.0
          0.0
                   0.0
                                   0.0
                                                    1.0
                                                            0.0
                                                                     0.0
  0.0
                                            0.0
  0.0
                   0.0
                                            0.0
  0.0
          C.0
                   3.0
                           0.0
                                    0.0
                                            0.0
                                                    0.0
  0.0
          0.0
                  0.0
                           0.0
                                           0.0
                                                    0.0
                                                            1.0
                                   0.0
                                                                     0.0
                                   0.0
                                                                     1.0
  0.0
          0.0
                   0.0
                           0.0
                                   C.0
                                            0.0
                                                    0.0
                                                            0.0
                                                                     1.0
   .5
          . 5
                   0.
                           0.
                                   0.
                                            0.
                                                    0.
                                                            0.
                                                                     0.
          . . 5
                   0.
                           0.
                                   0.
                                            0.
                                                    0.
                                                            0.
                                                                     0.
   . 75
           .05
                   J.
                           ).
                                   0.
                                           0.
                                                    0.
                                                            0.
                                                                     0.
                   . 5
  0.0
           . 5
                                   0.
                                                                     0.
                                            .
                   0.
                           ç.
  0.0
          0.
                                            0.
                                                    0.
                                                             0.
                                                                     0.
          0.
                   0.
  0.0
                                   0.
                                           G .
                                                                     0.
                                                    0.
                                                            0.
          .05
                   0.
                           0.
                                   0.
                                                    0.
                                                            0.
                                                                     0 .
  0.0
            . 4
                           0.
                                                    0.
          0.0
                   .75
   .25
                           · .
                                                    0.
                                   C.
                                            0.
                                                            0.
                                                                     0.
  0.0
           . 25
                                                            0.
                                   C.
                                            0.
                                                                     0.
          0.0
                           0.
                                    0.
                   .75
0.
          .25
  0.0
                           0.
                                   C.
                                                    0.
                                                             0.
                                                                     C.
   . 5
                                   0.
                                            0.
                                                    0.
                                                            0.
                                                                     0.
          1.0
                                                                     0.
                           6.
                                   0.
                                                    G.
                                                             u.
   . 5
                   ٥.
                           0.
                                                             0.
                                                                     0.
                                                    c.
   .25
           .75
                   0.
                           0.
                                   6.
                                            0.
                                                            C.
                                                                     0.
   10
          3.3
                   3.3
                           0.3
                                   0.1
                                            0.1
                                                    0.2
                                                             0.1
                                                                     0.2
                                                                             0.2
   60
 215.0
           151.0
                      150.0
                                51.0
                                           50.0
                                                     11.0
                                                               10.0
                                                                          0.0
 1000.
          325.
                  335.
 360.
         800.
                 1330.
                          1530.
```

FIGURE 5-1. Sample Problem Card Input From Subroutine TABLES (Data Card Types 1 through 23).

•	4								
1	1 1	1,	0 1	1 1	1		,		
1200.1	4.00	XMID	* *.00			30.40		2.60	
80.0	12.0			2.0					
27.0	1566.	800.	1000	1000.		27.0	3.0		
	.463	. 400	2000.	1003.	1000.	2000.	7.0	5000.	.050
	.405		44 W/ CH						
3100.2	4-00				1.03	30.60	8 4.0	2 00	060
	12.0			10.00	1.00	30.00	5.00	27.0	
27.0			10000	1000.	1000	27.0	3.0	2500.	9.0
	.500	.200	10030.	1000.	1003.	10000.	3.0	2300.	.030
. 300		A GUIDE							
4000.2					2.40	63.00		20.00	30.
						27.00			
27.00						33600.00			
	.150	.800	400.00	300.00	3330.00		٠.		. 200
			SUPPORT	SYSTEM	IFARSS	MULTIPLE	ROCKET	LAUNCHER	1
	2.			1000.				15.	
	12.	1.	12.	1.	1.	27.	1.	27.	3.
27.		4003.	10636.	1000.	4000.	27. 7000.	č.	94999.	.260
	.350	. 550					•••		
			SC	UM-C					
11000.2	1.	1.	4.	1.00	2.	175.	1.	60.	e.
2.00		60.00		1.00					
TOTAL	OVERKIL	L ARTILL	ERY DEVI	CE (1040	-81 FRE	ROCKET 80.			
12000.2	1.	1.	1.	1.	2.	80.	1.	20.	16.
6.00		30.00		1.00					
	140	MM GUN (TOVED						
13000.1	6.	1.5	6.	1.	1.	30.0	13.	2.	900.
300.00		1.20		2.00					
	110	MM HULT	IPLE ROC	KET LAUN	CHEK				
14000.2	٥.	40.	40.			16.0	1.	20.	240.
720.00		0.90		1.30					
	126	MM HO-1	7728 15	LF-PROPE	LLEDI				
17000.3	6.			1.	1.	18.0	15	,	500.
800.00		1.10		2.00		10.0		٠.	,,,,
555.55		1.10		2.00					

FIGURE 5-2. Sample Problem Card Input from Subroutine SYSTEM (Data Card Types 24 through 26e).

14								
1201 3	(.01	350 .350	IN	M155	IDUAL PU	RPOSE IC	H ROUND!	150
0.	4.		12.	16.	16.5	1200.	80.3	150.
11.								
39.	39.	47.	75.	123.	154.			
.19	.19	.31	.66	1.0	1.0			
3.1 80.	50.	5.0	5.0	10.4	20.0	1.0	100.0	167.6
40.	25.	3.0	3.0	0.0	12.0	2.0	60.0	
30.	20.	5.0 3.0 3.0	3.0	10.3	9.0	3.0	80.0	167.0
1202 2								
0	•	1.0	15	2.2	2.	2.5	80.	140.
12.	12.	21.	34.	46.	61.	82.	1.	
26.	26.	46.	73.	46.	142.	209.		
.19	.19	. 31	. 66	1.0	1.0	1.0		
100.0	100.0	60.0	90.3	900.	1200.	1200.		
1.	10.0	8.	9.	90.	.20.	120.		
2.	2.	1.6	1.0	18.	24.	24.		
4.	4.	3.2	3.6	30.	48.	48.		
20.	20.	16.	18.	100.	240.	240.		
80.	80.	21. 46. .31 .80.0 40.0 8. 1.6 3.2 16. 2.4 64. 240. 40. 20. 4. 8. 1.6 8. 1.2 32. 123. 24. 124.	72.	720.	966.	960.		
300.	300.	240.	270.	2703.	3600.	3636.		
50.	50.	40.	45.	450.	600.	600.		
25.	25.	20.	22.5	225.	300.	300.		
1.	1.	4.	4.5	45.	12	12		
2.	2.	1.6	1.0	18.	24.	44.		
10.	10.	6.	9.	90.	120.	120.		
1.5	1.5	1.2	1.4	13.5	18.	18.		
150.	150.	120.	135.	1350.	1800	160		
30.	30.	24.	27.	270.	360.	360.		
15.	15.	12.	13.5	135.	100.	100.		
3.	3.	123. 24. 12. 2.4 .5 1.0 5. 1.5 10. 75.	2.7	27.	36.	36.		
1.2	1.2	1.0	1.4	10.8	14.4	14.4		
6.	6.	5.	2.7	270.	360.	36C.		
1.8	1.8	1.5	1.5	15.2	21.6	21.6		
20.	26.	16.	16.	186.	243.	240.		
٠٠٠.	80.	X M3 45 H3	IN XMI	4 JU .	ROUND)	600.		
1205.3	.060	.115 6. 24.	17.3	.980	2.	1206.	80.0	148.
0.	4.	115 8. 24. 55. 31 020. 410. 92. 23. 500. 50. 1000. 3306.	12.	16.	17.3			
12.	32.	55.	74.	114-	62.			
.19	.19	.31	.60	1.0	1.0			
800.	306.	520.	o3C.	843.	930.			
400.	400.	410.	415.	420.	450.			
20.	24.	22.	20.	21.	26.			
50.	50.	50.	50.	23.	60.			
500.	500.	500.	500.	530.	650.			
50.	100.	50.	50.	53.	60.			
3000.	3300.	3336.	3000.	3130.	3636.			
460.	400.	410.	415.	426.	45C .			
200.	200.	205.	208.	210.	225.			
10.	10.	13.	10.	10.	11.			
25.	25.	25.	25.	25.	20.			
250.	250.	250.	250.	256.	220.			
25.	25.	25.	25.	25.	20.			
500. 1503.	500.	1500.	500. 1500.	500. 1500.	1620.			
300.	300.	367.	315.	315.	340.			
150.	150.	153.	158.	153.	170.			
33.	30.	31.	34.	32.	34.			
14.	14.	14.	14.	14.	14.			
140.	140.	140.	140.	140.	140.			

FIGURE 5-3. Sample Problem Card Input From Subroutine ROUND (Data Card Types 27 through 40)(Page 1 of 5).

14.								
	14.	14.	14.	14.	24.			
400.	400.	400.	400.	400.	400.			
1200.	400.	400.			1200.			
		CLGP II	4 XM155					
1204.3	.101	2.97	17.0	. 953	3.	600.	40.	
10								
.00	.00	.00	.00	.00				
.10	. 26	. 9	.3	.4				
.20	.60	.30	.50	.60				
.30	. 80	.40	. 55	. 70				
.40	1.00	.30	.60	. 00				
. 80	1.60	.60	. 80	1.00				
1.60	2.50	.60 .80 1.20 1.40 1.80	1.20	1.50				
2.80	3.4	1.20	1.70	2.10				
4.40	4.20	1.40	2.30	2.70				
6.00	4.60	1.80	2.70	3.10				
0.	4.	1.	12.	16.	19.			
.2	.2	3	. 55	. 80	1.0			
	X				12 (0	UAL PURPOS	E ICH F	CONDI
3101.2	-100	- 450	23.0	.950	1.	800.	70.	160.
0.	4.	8.	12.	16.	20.	800. 23.0 39.		
13.	13.	17.	22.	29.	33.	39.		
34.	34.	47.	71.	96.	111.	144.		
.18	-18	47. .25 .98	.44	. 64	1.0	1.0		
3.5	40.	.98	.96	.98	0.0	180.		
	Ju.	5.0	5.0	10.0	20.0	3.0	80.0	160.
40.	25.	3.0 .	3.0	6.0	12.0	2.0	40.0	160.
30.	20.	3.0	3.0	16. 29. 96. .69 .98 10.0 6.0 10.0 W/ CHG 1	20.0	3.0	80.0	160.
	XM:	321E57 IN	MIZ3A4	W/ CHG 1	SIHE	RAP ROUND!		
3105.5	.150	.523	30.0	.950	2.	27.	50.	140.
0.	•	9.	13.	10.	22.	27.	30.	
19.	15.	24.	33.	***	58.	76.	88.	
25.	25.	49.	70.	100.	145.	195.	555.	
.100	.18	. 25	•••	.69	1.0	1.0	1.0	
100.0	100.0	100.0	100.0	100.0	1100.	1500.	1400.	
4.0	60.0	60.0	60.0	60.0	000.	720.	240.	
3.6	3.5	3.5	0.0	0.0	00,	12.	04.	
5.0	5.0	2.3	5.5		23.	45.	٤٥٠	
50.0	50.0	50.0	50.0	30.0	500	*00	500	
5.0	5.0	5.0	5.0	5.0	500.	50.	500.	
40-	40.	60.	60.	40.	600	400.	600	
300-	300-	300-	300-	300.	3000	3000-	3000-	
50-	50-	50-	50-	50.	550.	600.	700-	
25.	25.	25.	25.	25.	275.	300-	350.	
3.	3.	1.	3.	3.	28.	30.	35.	
1.2	1.2	1.2	1.2	1.2	12.	14.	18.	
2.4	2.4	2.4	2.4	2.4	26.	28.	36-	
24.	24.	24.	24.	24.	240-	280.	360-	
2.4	2.4	2.4	2.4	2.4	24.	28.	29.	
24.	24.	24.	24.	24.	240.	280.	350.	
240.	240.	240.	240.	240.	2400.	2800.	2900.	
40.	40.	40.	40.	40.	400-	450.	500-	
20.	20.	20.	20.	20.	200-	225.	250-	
2.	2.	2.	2.	2.	20.	23.	25.	
	1.	1.	1.	1.	10.	11.	13.	
1.		•	2	2	20.	23.	25	
1.	2.			6.1			63.	
2.	20.	50.	20.	20.	200.	225.	250.	
3102.2 0. 15. 25. 100.0 6.0 6.0 50.0 50.0 50.0 50.0 25. 3.0 2.4 24. 24. 24. 24. 24. 20. 20. 20.	20.	30.	20.	20.	500.	225.	250.	

FIGURE 5-3. Sample Problem Card Input From Subroutine ROUND (Data Card Types 27 through 40)(Page 2 of 5)

THIS PAGE IS BEST QUALITY PRACTICABLE

			-					
80.	80.	83.	٥٥.	83.	dOG.	060.	900.	
	XM987E	1N M12	344 W/	CHG 12	30G. (HE ROUND 2. 18. 51. 119. 1.0 1400. 900. 150. 150. 360. 360. 360. 120. 120. 120. 120. 240. 240. 240. 240. 800. 800. 800. 800. 800. 800. 800. 8)		
3103.2	.10	.180	22.0	.980	2.	.009	70.	145.
0.	٠.	8.	12.	16.	18.	22.0		
15.	15.	24.	33.	44.	51 •	65.		
25.	25.	49.	70.	100.	119.	166.		
. 18	.18	.25	. 4 4	.69	1.0	1.0		
1500.	1500.	1550.	1500.	1700.	1800.	2000.		
160	850.	900.	800.	900.	900.	1000.		
155.	150.	155.	100.	173.	100.	200.		
30	15.	13.	22	11.	16	40.		
300.	300	300	120	340	360.	400		
30-	30.	30.	32.	36.	36.	40.		
300.	300.	324.	324.	340.	360.	400.		
900.	900.	900.	960.	971.	1050.	1200.		
1000.	1000.	1000.	1050.	1042.	1200.	1400.		
500.	500.	500.	>36.	540.	600.	700.		
163.	100.	100.	105.	108.	120.	140.		
10.	10.	10.	11.	11.	12.	14.		
20.	23.	20.	21.	22.	24.	20.		
230.	200.	200.	210.	223.	240.	280.		
23.	20.	.50.	21.	22.	24.	28.		
200.	200.	200.	210.	220.	240.	260.		
600.	600.	630	oss.	660.	720.	340.		
800.	eau.	300.	eoc.	8.3.	400.	000.		
430.	400.	400.	400.	400.	400.	500.		
80.	au.	BC.	80.	83.	ьо.	65.		
14					22.	30		
160	160	170	2 0.	20.	200	200		
100.	165.	179.	200.	233.	200.	200.		
320.	320 -	340.	420.	40.10	-00-	400.		
400.	400.	510.	600.	633.	600-	600.		
	NON-NI	ICLEAR S	PFAR (1	CH WARHE	ADI			
4001.2	2.3	130.3	50.0	.965	AD1 1. 0 60.30 0 150.00 0 163.00	3C.	2.0	180.
0.00	12.00	24.00	36.0	0 40.0	0 60.30			
22.30	22.00	60.00	90.0	0 121.0	0 150.00			
25.30	25.35	65.30	98.3	0 130.0	0 163.00			
1.00	1.00	1.00	1.0	0 1.0	0 1.00			
0.20	180-00	0.97	0.9	5 0.9	0 163.00 0 1.00 7 0.00	980.00		
80.	50.	5.0	5.0	10.0	20.	3.0	90.0	160.
40.	25.	3.0	3.0	5.3	10.	2.0	40.6	80.
30.	20.	3.0	3.0	10.0	20. 10. 20.J	3.0	0.0	160.
6001	- AK22	KUCKET	PASIFW	CICM WAR	HEADI	00.0		150
5501.2	.030	10.99	25.	. 4	25	90.0	1".	150.
40.	40	10.	150	20.	.50			
50	50	9.)	166	233.	275			
1.	1.	1.	105.	223.	1.			
. 2	100.	. 95		9	5	840.		
120.	82.	3.	6.0	11.	8 80.0	4.3	40.00	160.
60.	46.	2.	4.3	6.	7 40.	2.0	20.	80.
30.	20.	1.	2.	3.	16.	1.	10.	40.
	SCUM	MEUZ)	ISSILE	WARHEADI				
11001.2	1.	1.	175.		5 1.	я.	2.	
0.	44.3	88.7	133.	157.	200.			
30.	90.	160.	270.	360.	450.			
60.	160.	360.	540.	723.	900.			
1.	1.	1.	1.	1.	HEAO) 1. 25. 250. 275. 1. 5			

FIGURE 5-3. Sample Problem Card Input From Subroutine ROUND (Data Card Types 27 through 40)(Page 3 of 5).

```
60.
  800.
           175.
                               75.
                                        45.
                       . 95
                     10.
                                                30.
                                                                180.
                                                                        240.
              TOAO-8 (SUBMISSILE WARHEAD)
12001.2
             1.
                                                          10.
                                                1.
                                                                   6.
    0.
            16.
                              48.
                                                50.
                            480.
                                      960.
   .0.
           160.
                    320.
                                               800.
                    460.
  120.
           240.
                             1. 90
                                       1. 95
                                              1200.
    1.
                                                 1.
           100.
  800.
                     30.
                                       45.
           406.
                                                30.
                                                        50.
                                                                 180.
                                                                         240.
          140 MM GUN HE PROJECTILE
13001.1
                             3G.
18.
98.
           1.
                     12.
                                         .97
                                                2.
                                                       900.
                                                               300.
                                      24.
                                               30 .
   23.
                                               140.
   40.
            60.
                    110.
                            170.
                                     220.
                                               320.
    0.
           300.
                    300:
                                    400.
                                             450.
                            300.
                                     185.
  100.
           100.
                    100.
                            100.
                                              280.
  15.
           15.
                    15.
                             15.
                                                48.
                   45.
                           70.
                                     45.
                                             45.
                                    70.
 70.
  28.
           20.
                    24.
                                               28.
                                    48.
                   48.
                                              300.
                    300.
                            300.
  J.
                    150.
                             150.
                                     100.
           148.
                                               150.
  101.
           101.
                                      137.
                            10.
                    1.6.
                                               120.
   10.
            10.
                     10.
                                       10.
                                                10.
                                      14.
   14.
            14.
                     14.
                             14.
   11.
                     11.
                                                11.
   11.
            11.
                              11.
                                                11.
                     11.
                                       11.
                                     106.
  106.
           106.
                    106.
                             106.
                                              136.
    ٥.
           149.
                    171.
                             40.
   56.
15.
            56.
                     40.
                                      117.
                                               101.
                     15.
            15.
                                      15.
                                               46.
             9.
   16.
            16.
                              10.
                             11.
   11.
                     11.
            11.
                                       11.
                                                11.
                                       11.
                                                11.
            11.
   40.
            40.
                              40.
                                       40.
                                                40.
                     40.
               110 MM MULTIPLE ROCKET LAUNCHER (HE WARHEAD)
720.
    0.
                     1.
                             16.
14301.2
             1.
                                      16.
   20.
                             135.
            45.
                     90.
                                      100.
   35.
                            250.
            80.
                    160.
                                      310.
    0.
           300.
                    660.
                             6CC.
                                      600.
  500.
   30.
                                       30.
                              30.
                     60.
75.
                              8C.
                                       90.
75.
   80.
75.
            83.
            75.
                              45.
                     45.
                                       30.
   45.
            45.
   30.
            30.
                              30.
   50.
                                       50.
```

FIGURE 5-3. Sample Problem Card Input From Subroutine ROUND (Data Card Types 27 through 40)(Page 4 of 5).

180.	180.	180.	180.	180.			,	
0.								
	•							
•								
•								
•		•						
•	•							
•	•	•						
•	•							
•	•							
•	•	•	•					
•	•	•	•		•			
•	•	•						
•	•		•	•				
•	•	•	•	•	•			
•		•	•		•			
•		•	•	•				
•	•	•	•	•				
. •	•	•	•	•	•			
•	. : .							
17001.3	125	MM HOME!	ZER (H:	PROJECTI	LE)			
		1.	18.0	. 95	2.	500.	800.	
0.	3.6	7.2	. 10.8	14.4	18.0			
9.	18.		24.	72.	90.			
20.	33.	70.	100.	123.	153.			
400.				420.	•			
220.	400.	400.	400.	420.				
25.	220.	220.	220.	230.	260.			
74.	74.	25.	25.	25.				
63.	63.	74.	74. 63.	74. 63.	74.			
42.	42.	63.	03.	53.	63.			
	81.	81.	42.	81.	42.			
300.	300.	336.	300.	300.	81. 300.			
0.		330.			300.			
	•	•	•	•	•			
	•	•	•	•	•			
			•	•	•			
			•	•	•			
			•	•				
				•				
0.								

FIGURE 5-3. Sample Problem Card Input From Subroutine ROUND (Data Card Types 27 through 40)(Page 5 of 5).

```
0
875.
1730.
                                          DIVARTY FOC
     2
0.00
                     61.
                                          12.
                               63.
                                          24.
CORPS FOC
920.
                               27.
    2
           0
0.00
          670.
                               70.
                     61.
                                          12.
          1700.
                               62.
                                          24.
                        BN FOC BN1
B BIRY BN1
XM150
                                          XM155 DS
XM155
             3
                                                      DS
    1200.3
  0.
                        62.
                                   72.4
             160.
                                  71.9
71.5
71.3
69.5
             270.
593.
960.
                        58.2
   300.
                                             8.
                        56.
                                             10.
                        55.
51.5
51.2
A BTRY
   993.
              1170.
                                             8.
   1120.
              1460.
                                   68.5
   1500.
              1633.
                                  63.1
BN1
                                             XM155
                                                      05
    1200.3
                        XMISS
  0.
             140.
250.
                        63.5
                                  73.9
                                  73.4
73.
72.9
/1.
70.
                                             4.
   283.
              573.
                        60.
                        59.5
   590.
              900.
                                             10.
                        56.5
53.
52.7
   930.
             1150.
                                             8.
             1030.
                        C BIRY
                                             14155 DS
                                  BNI
    1200.3
   0.
             120.
                        65.
                                   75.4
                                  74.9
74.5
74.3
72.5
             230.
  260.
             550.
930.
                        61.5
                                            10.
                        61.
58.
54.5
54.2
6N FDC
             1130.
                                             . 0
   1160.
              1440.
                                   71.5
                                             b .
   1460.
             1630.
                                  71.4
                                          4.6
XM155
                                  BNZ
                                                   US
               3
                                  BNZ
                                             XM135 DS
                             XM155
    1200.3
  0.
                        67.2
                                             8.
             114.
                        67.
             250.
                                  00.1
                                             6.
             400.
710.
1103.
   270.
                                   65.1
                        06.1
02.
61.7
                                  64.6
                                            12.
   420.
   740.
              1310.
                                  63.5
   1340.
              1630.
                        56.5
A BTRY
                                   62.5
                                             12.
                                             AMLSS DS
                                  SND
    1200.3
                        XM155
             90.
                                  67.1
   0.
                        60.7
                                             8 .
                        68.5
                                  56.6
                                             6.
   250.
              380.
                        68.
                                  60.0
                                             5.
   400.
             1080.
                        67.5
   720.
                        63.2
                                             12.
                                  66.1
   1110.
              1290.
                                  65.
                                             10.
                        50.
C BTKY
xM155
              1630.
                                  BNZ
                                             XM155
                                                     26
    1200.3
             70.
                        70.2
                                   68.6
             21J.
36J.
67U.
   90.
                        70.
                                            6.
                                  00.1
                                  67.9
   380.
                        69.1
                        65.
64.7
59.3
84 FOC
8 STRY
XM155
   700.
             1050.
                                  67.6
                                             12.
   1040.
                                            10.
                                  66.5
             1630 .
                                   55.5
   1300.
              3
                                                  DS
                                             XM155
                                  9.43
                                                      02
    1200.3
                        10.5
             350.
                                             6.
```

FIGURE 5-4. Sample Problem Card Input From Subroutine FUFDC (Data Card Types 41 through 56)(Page 1 of 5).

```
5.
4.
5.
8.
370.
                     70.3
          61).
                     69.8
67.
                               56.
55.7
630.
          690.
          1240.
                     63.5
A BIRY
1320.
           1630.
                                          XM155
                                                   DS
                               BN3
 1200.3
                     XM155
                     72.
71.8
71.3
350.
          330.
          593.
673.
973.
                               58.8
58.6
57.5
                                          5.
610.
                                          5.
700.
                               57.2
57.2
990.
          1270.
                     66.1
1300.
          1630.
                     65.
C BIRY
                                          XM125
                                                   05
                               843
 1200.3
                     XM155
0.
330.
590.
          31C.
                     73.5
          570.
650.
950.
                     73.3
72.8
                               60.3
                                          5.
                                          4.
680.
                     70.
970.
          1250.
                     69.6
                               55.7
                                          8.
                     66.5
BN FOC
1280.
          3
                               58.7
                               BN4
                                                    REINF TO SN 2
                     8 BTRY
                               8 N4
                                                    REINF TO BN 2
                     M123A4
57.7
 3100.2
C.
190.
          173.
                                67.8
                                          12.
                               67.3
          594.
                     67.5
                                          12.
                     67.
60.6
62.5
A BTRY
610.
          890.
                                          ٥.
910.
1230.
5
          1190.
                               64.3
                                          5.
          1633.
                               914
                                          M14344
                                                    REINF TO BN 2
 3100.2
                     M12344
0.
21C.
          190.
                     66.2
                                          12.
                               66.3
                     65.5
                               65.6
          61.
                                          12.
630.
          910.
                                          5.
930.
          1220.
                               65.3
                                          5.
8.
1250.
          1030.
                     61.
C 379Y
                               63.
                                          M123A4 REINF TO BN 2
 3100.2
                     M123A4
64.7
64.5
          210.
                               64.8
                                          12.
230.
          630.
                               04.3
                                          12.
650.
950.
          933.
                     64.
                               64.1
                                          5.
                               63.3
                                          . .
                     59.5
8N FDC
B B RY
M123A4
1270.
          1633.
                                61.5
           3
                               BN5
                                          M123A4
                                                    GSR TO BN 3
                               BNS
                                          M123A4
                                                    GSK TO EN 3
 3100.2
0.
250.
550.
          230.
                                59.3
                     75.6
          520.
950.
                     75.4
                               58.8
                                          4.
                                          4.
                               20.6
970.
          1230.
                                56.2
                                          4.
                     71.6
          1415.
163J.
1250.
                     71.3
                                55.5
                                          6.
                     66.3
A BIRY
1440.
                                56.3
                                BNo
                                          M123A4 GSR TO BN 3
 3100.2
                     M12344
                               57.0
230.
          210.
                     74.1
73.9
                                          4.
                                          4.
                                57.3
          930.
                               55.
54.7
54.3
630.
                     70.1
64.8
64.8
950.
          1210.
                                          5.
1420.
           1530.
```

FIGURE 5-4. Sample Problem Card Input From Subroutine FUFDC (Data Card Types 41 through 56)(Page 2 of 5).

```
3100.2
                     C BTRY
M123A4
72.6
72.4
                              8 N 5
                                          M123A4 GSR TO BN 3
                                56.3
55.8
53.5
53.2
210.
          193.
590.
930.
          1190.
                     68.6
1210.
           1370.
                                52.8
                     63.3
BN FDC
B BTRY
FARSS
1400.
           1630.
                                53.3
8N6
                                           6.
FARSS
                                                      GS AT D/A
            3
                                840
                                           FARSS
 5000.2
210.
                                70.5
          190.
                     60.8
                                           8 .
                                70.
           460.
                     66.6
                                           6.
                     59.7
480.
           810.
                                           à.
          940.
1190.
                                69.5
69.
830.
970.
                                           6.
                     56.5
55.5
53.7
                                           5.
           1430 .
1460.
           1630.
                                66.7
                                           FARSS
                     A BTRY
FARSS
                                                       GS AT D/A
                                949
 5000.2
190.
           170.
                     62.3
                                72.
                                           8.
                                71.5
71.3
71.
                                           6.
          440.
                     02.1
                     61.6
810.
           920.
                                           6.
                                70.5
950.
                     58.
                     57.
                                68.
1200.
           1410.
                                           10.
1440.
           1630 .
                      C BIRY
                                                       GS AT D/A
                                BNE
 5000.2
                     FARSS
0.
          150.
                     63.8
                                73.5
                                           8 .
                                73.
72.8
           420.
                     63.6
                                           6.
           770.
                     63.1
                     62.7
59.5
5d.5
56.7
790.
          1150.
                                72.5
                                           6.
                                72.
69.5
69.7
                                           5.
1180.
           1390.
                                           10.
                                           4.
ML23A4
M123A4
1420.
           1530.
                     BN FDC
                                                      GSR TO DIA FROM CORPS
GSR TO DIA FROM CORPS
                                3N7
            3
 3100.2
                     65.
64.d
54.5
54.
53.7
A BTRY
          490.
750.
1120.
                                71.
/u.5
72.5
                                           7.
500.
780.
                                           11.
1146.
           1310.
                                72.3
                                71.9
8N7
1330.
           1630.
                                           H12344
                                                        GSR TO DIA FROM CORPS
 3100.2
                      M12344
                                           7.
480.
          460.
                     63.4
                                69.5
                                69.
                                           3.
700.
           1130.
                      53.
                                           11.
                     52.5
52.2
C BTRY
M123A4
1126.
           1290.
                                73.4
           1030 .
                                3N7
                                           M12344
                                                        GSR TO DIA FROM CORPS
 3100.2
           440.
                                           7.
3.
0.
                     62.
                                68.
460.
           710.
740.
           1000.
                      51.5
                                69.5
                                           11.
                    51. 69.1
50.7 68.0
8N FOC BN8
                                69.3
1100.
           1270.
                                           4.
1290.
           1630.
            2
                                                   GS AT CORPS
                    A BTRY BN8
                                        SPEAR
                                                   GS AT CORPS
```

FIGURE 5-4. Sample Problem Card Input From Subroutine FUFDC (Data Card Types 41 through 56)(Page 3 of 5).

```
4000.2
        1630.
                57.5 6:
                          65.
                                SPEAR
                                         GS AT CORPS
 4000.2
                SPEAR
0.
        1033.
                  65.0
                           55.0
               1
         1
 1201.3
 1201.3
 1201.3
               1
                    1
 1201.3
 1201.3
 1201.3
               1
                    1
 1201.3
 1251.3
 1201.3
         1
             1
 1201.3
 1201.3
 1201.3
 5 12 12 12
1102.1 1103.1 1104.1 1109.1 1201.3 1202.3 1203.3
4001.2 >0031.2
                                                             3101.2 3102.2 3103.2
 1102.1 1103.1
                  1104.1 1109.1 1201.3 1202.3 1203.3 3101.2 3102.2 3103.2
 1102.1 1103.1
                  1104.1 1109.1 1201.3 1202.3 1203.3
                                                             3101.2 3102.2 3103.2
        12
   6
 1102.1 1103.1
                  1104.1 1109.1 1201.3 1202.3 1203.3 3101.2 3102.2 3103.2
 4301.2 3001.2
 1102.1 1103.1 1104.1 1201.3 1202.3 1203.3 3101.2 3102.2 3103.2 4001.2
 5001.2
 1102.1 .103.1 1104.1 1201.3 1202.3 1203.3 3101.2 3102.2 3103.2 4001.2
 2011.2
 7 11 10 10
1102.1 1103.1 1104.1 1201.3 1202.3 1203.3 3101.2 3102.2 3103.2 4001.2
 5631.2
                  1201.3
 1102.1 1103.1
                           1202.3
                                    1203.3
                                           3101.2 3102.2
                                                              3103.2
                                                                                5401.2
                                                                       4041.2
                  1201.3
                         1202.5
                                    1233.3
                                            3101.2 3102.2
                                                             3103.2
                                                                       4.51.2
                                                                                5001.2
 d 10 10
1102.1 1103.1
1102.1 1103.1
1102.1 1103.1
                   10
                  1201.3
                           1202.3
                                    1203.3
                                             3101.2
                                                                       4001.2
                                                     3102.2
                                                              3103.2
                                                                               5001.2
                  1261.3
                           1202.3
                                    1233.3
                                             3101.2
                                                     3102.2
                                                              3103.2
                                                                       4001.2
                                                                                5601.2
                  1201.3
                           1202.3
                                    1233.3
                                             3101.2
                                                     3102.2
                                                              :103.2
                                                                       4001.2
                                                                               5001.2
 9 10 10
1102.1 1103.1
1102.1 1103.1
1102.1 1103.1
1102.1 1103.1
                   16
                 1231.3
                           1202.3
                                    1203.3
                                             3101.2
                                                     3102.2
                                                              3103.2
                                                                       4001.2
                                            3101.2 3102.2
3101.2 3102.2
                  1201.3
                           1202.3
                                    1203.3
                  1201.3
                           1402.3
                                    1203.3
                                                              3103.2
                                                                       4001.2
                                                                               5001.2
                   10
 1102.1 1103.1
                  1231.3
                           1202.3
                                    1203.3
                                             3101.2
                                                                       4001.2
                                                                               5001.2
                                                     3102.2
 1102.1 1103.1
                  1201.3
                           1202.3
                                    1203.3
                                             3101.2
                                                     3102.2
                                                              1103.2
                                                                       4001.2
                                                                               5001.2
 1102.1
         1103.1
                           1202.3
                  1201.3
                                             3101.2
                                                     3102.2
                                                              3103.2
                                                                       4601.2
                                                                               5001.2
        10
                                               74.
54.
74.
59.
74.
   65.
            80.
                     69.
                             77.
                                      73.
                                                                71.
                                                                         7 t.
   18.
                    79.
                                                       79.
            65 .
                             62.
                                      90.
                                                                50.
                                                                         71.
                                                                                 53.
6P.
            d0.
   65.
                    66.
                                      68.
   73.
            65.
                             62.
                                      77.
                                                       79.
                                                                56.
                                                                         79.
                                                                                  53.
                    76.
                                                       70.
   64.
            60.
                             77.
                                      57.
                                                                71.
                                                                         72.
                                                                                  68.
   73.
                                      76.
            65.
                             62.
                                                                56.
                                                                         74.
                                                                                  53.
                                                        10.
                                                                                  .30
                                      65.
```

FIGURE 5-4. Sample Problem Card Input From Subroutine FUFDC (Data Card Types 41 through 56)(Page 4 of 5).

73.	65.	75.	62.	75.	59.	79.	36.	79.	53.
63.	83.	64.	77.	66.	74.	70.	71.	71.	60.
73.	65.	75.	62.	75.	59.	70.	50.	76.	53.
62.	80.	63.	77.	64.	74.	64.	71.	70.	66.
72.	65.	73.	62.	74.	59.	75.	56.	75.	53.
61.	80.	62.	77.	61.	74.	64.	71.	70.	68.
72.	65.	73.	62.	73.	59.	75.	56.	75.	51.
61.		62.	77.	59.	74.	ol.	71.	65.	64.
70.	65.	72.	62.	72.	59.	73.	56.	75.	53.
60.	80.	61.	77.	58.	74.	59.	71.	61.	64.
69.	65.	70.	62.	71.	59.	72.	56.	75.	53.
60.	60.	61.	77.	57.	74.	58.	71.	59.	67.
65.	65.	70.	62.	73.	39.	71.	>6.	75.	53.
60.	180.	360.	540.	720.	900.	lues.	1260.	1440.	1620.

FIGURE 5-4. Sample Problem Card Input From Subroutine FUFDC (Data Card Types 41 through 56)(Page 5 of 5).

3	.501	.001	.0	01 .0	01 .	001	.001	.001	.00	1	.001	.001	2.0	.5	2
1.	1.	1.	1.	1.	1.	1.	1.	1.		1.	1.	1.	1.	1.	1.
1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.	1.
2.	1.	4.	3.	6.	5.	9.	7.	10.							
				6.											
					7.										
1.	2.	1.	1.	1.	1.	1.	1.	1.	2.						
1.	1.	1.	2.	4.	3.	5.	6.								
1	1	1		1	1	1	1	1		1					1
0.28	0.27	. 0.	bù	1.07	1.0		0.25	3.60		65	3.63	u.	25	0.25	
0.33	0.33		50		0.2		0.25	0.24		14	1.07				
1.00	0.33		25		1.4		1.00	4.00		00	4.00			1.31	
1.65	1.05		.)	3.30			0.53	0.24		55	2.02		73		
95.0	3.27	1.		1.27	1.2		3.75	0.00		60	0.60		25	0.25	
0.33	C.33		53	6.00	0.2		0.28	0.24		34	1.67		30		
1.00	3.33	1.	25	1.47	1.4		1.00	4.00		OC	4.00			1.31	
1.65	1.65		. 3	3.00	0.6		0.50	0.24			2.02				
0.28	0.27		80		1.0		0.55	0.60		50	0.60		25	0.25	
0.33	3.13		50	0.33	0.2		0.25	0.24		14	1.07				
1.00	J. 33		25	1.47	4.4	5	1.30	4.00		00	4.00			1.31	
1.65	1.55		.0	0.33	C.0	5	0.50	U.24		55	2.02				
0.28	0.27	1.	00	1.27	1.2		J. 75	0.60		66	0.60			0.25	
0.33	6.33	5.	50	6.00	0.2		0.28	0.24		34	1.07		36		
1.30	2.43	1.	25	1.47	1.4	5	1.00	4.00		00	4.00	1.	31	1.31	
1.65	1.65			0.30	Ú.0		3.50	0.24		55	2.02				
0.28	0.27		60	1.07	1.0		0.55	0.60		60	0.63		25	0.25	
0.33	C.33			6.00	0.2		2.25	0.24			1.07				
1.30	0.33		25	1.47	1.4		1.30	4.03		00	4.60			1.31	
1.65	1.05		.0	0.33	0.5		0.50	0.24		55	2.02		73		
0.28	6.27		CJ	1.27	1.2		0.75	0.60		co	0.60			U.25	
0.33	0.13		50	6.00	u.2		0.28	0.24			1.07				
1.00	0.33		25	1.47	1.4		1.00	4.00		60	4.00			1.31	
1.65	1.65		.0	0.00	0.5		3.50	0.24		55	2.02				
0.20	0.27		80	1.01	1.0		0.55	0.60		OC	0.60			0.25	
0.33	0.33		50	0.00	0.2		0.25	0.24		14	1.67				
1.00	0.33		2>	1.47	1.4		1.00	4.00		-0	4.00			1.31	
1.65	1.55		. 0	0.00	0.6		0.50	0.24		55					
3.28	0.27		00	1.27	1.2		J.75	0.60		60	0.60			0.25	
0.33	0.33		50	0.00	0.2		0.28	0.24		34	1.07				
1.00	0.33		25	1.47	1.4		1.00	4.00		00				1.31	
1.65	4.65	13	.0	0.00	0.6	5	0.50	0.24	c.	55	2.62	C.	73		
1															
2.	999	9.													

FIGURE 5-5. Sample Problem Card Input From Subroutine WPMIX (Data Card Types 57 through 82).

1432							
1.300	1.000						
2.060	2.000						
4.000	1.000				*		
5.360	12.000						
755.000	4.000	1.000	1.000	1.000	.000	2.430	
1.630	1.000	00	.000	.400	755.312	.000	5.000
60.333	499.000	87.100	80.300				
518.000	612.000	65.300	70.000				
627.000	930.000	83.700	79.300				
958.033	1143.000	79.700	78.000				
1173.630	1619.000	75.830	76.660		700 313		
1.000	1.000	.000	78.100	.505	755.313	.000	4.000
425.630	625.000	85.300	77.300				
640.000	1209.000	63.300	76.900				
1236-000	1619.000	79.400	75.700				
1.000	1.000	.000	.000	.000	755.322	.cc.	5.000
63.063	508.000	91.900	71.900				
522.000	674.0.0	69.630	71.300				
688.000	995.003	88.200	70.103				
1016.000	1086.303	82.400	70.100				
1115.300	1619.000	81.600	68.300				
1.000	1.500	.000	.000	.000	755.3.3	.000	5.000
60.000	475.000	93.130	69.400				
. 509.000	551.000	89.900	66.700				
558.033	991.000	50.100	66.100				
1121.000	1099.000	86.200	66.000				
901.000	3.000	5.000	2.000	5.000	.000	1.000	
2.000	0.000	.000	.000	.000	901.210	.000	6.000
60.000	424.000	79.230	79.200		,,,,,,,,,	• • • • •	0.003
439.000	000.000	77.600	78.500				
633.000	944.000	73.166	70.3.0				
983.000	1153.000	68.900	75.900				
1175.000	1391.000	05.300	74.300				
1398.000	1519.060	64.1CC	74.000	was a second	territoria successiva		
2.000	6.000	.000	.000	.000	901.220	.000	5.300
60.003	409.000	79.750	77.703				
423.000	553.000	77.900	77.200				
573.003	995.000	74.600	77.200 77.400				
1182.603	1519.060	64.100	76.200				
2.000	0.001	.536	.500	.000	901.230	.000	5.000
60.000	401.000	80.230	76.400		,,,,,,,,		,,,,,
423.000	539.000	77.200	75.400				
653.330	947.000	75.700	75.350				
1038.000	1318.000	69.300	74.500				
1352.000	1619.000	64.200	74.500				
902.000	3.000	6.000	2.000	8.000	.000	1.060	
3.300	6.000	.000	.000	.000	902.210	.305	6.030
60.303	372.000	81.200	75.000				
367.060	670.000	79.200	74.403				
1045.000	1017.000	75.000	73.300				
1168.000	1470.000	72.300	72.100				
1512.000	1019.303	65.2.0	76.100				
3.600	6.000	000	.200	.000	902.220	. ooc	7.000
60.000	461.000	81.700	74.300		, , , , , , , ,		
480.000	622.000	79.350	72.903				
541.000	1000.000	77.400	70.900.				
1627.000	1154.000	73.700	70.500				
1169.000	1299.000	72.300	72.300				

FIGURE 5-6. Sample Problem Card Input From Subroutine REDIN (Data Card Types 83 through 87)(Page 1 of 5).

1335.000	1488.000	74.300	67.500		1		
1507.000	1019.000	72.434	65.700				
3.000	6.000	.000	.002	.000	902.230	.000	6.000
60.060	463.000	82.400	73.900	.000	402.230	.005	0.000
473.000	627.063	81.400	74.700				
601.000	159.000	76.900	74.200				
987.300	1198.000	72.300	73.400				
1218.000	1238.600	69.200	73.400				
1553.000	1619.000	67.200	72.400				
760.000	3.000	5.300	3.000	11.000	000	2 000	
4.000	6.600	.006	.000	.303	.000	2.000	2
60.000	470.060	62.900	73.200	. 303	769.210	.000	7.000
510.000	564.000	77.436	74.400				
689.000	959.000	74.730	76.000				
981.003	1133.000	71.900	77.000				
1155.000	1420.000	60.030	70.700				
1434.000	1520.003	66.300	76.300				
1539.000	1619.060	64.036	74.100				
4.003	6.000	.0.0	.300	.000	760.220	.000	6.000
60.000	448.000	81.800	72.200	.000	100.220	.000	0.000
475.333	023.000	77.100	73.900				
634.003	707.000	75.200	73.360				
809.603	1172.000	72.130	74.600				
1197.303	1483.000	69.900	73.000				
1513.000	1617.000	65.400	71.200				
4.000	6.000	.630	.000		*** ***	^~~	
63.035	436.600	80.900	73.000	.000	760.230	.000	5.000
464.000	612.063	76.700	72.800				
627.000	1137.000	75.230	70.900				
1152.030	1534.000	73.500	69.400				
1550.000	1619.000	72.500	66.500				
753.000	3.000	6.000	4.000	14.000	.000	1.000	
5.000	6.000	.000	.300	.000	753.210	.000	4.000
60.000	413.000	77.000	73.900	.000	793.210	.000	4.000
447.000	1044.000	72.200	73.500				
1064.333	1461.300	67.400	73.400				
1509.000	1619.000	65.400	72.200				
5.000	5.000		.000	.000	753.220	.000	4.000
60.000	422.000	77.400	72.900	•000	173.220	.000	4.000
456.000	1020.000	72.500	72.400				
1034.000	1430.000	70.230	72.860				
1495.000	1019.000	063.60	70.403				
5.000	6.000	.0.0	.600	.000	753.236	.000	4.000
60.000	402.000	78.300	72.400	.000	173.230	.000	4.000
443.000	1206.000	72.500	71.700				
1212.000	1505.000	72.300	71.000				
1530.000	1619.000	70.000	68.100				
843.000	3.000	0.000	4.303	17.300	.000	1.000	
6.000	6.000	.000	.000	.000	843.210	.000	5.000
639.000	720.000	92.5.0	71.500	.000	043.610	.000	7.000
794.000	951.000	61.600	72.800				
1004.000	1190.000	75.630	77.300				
1229.030	1550.000	70.100	74.300				
1500.000	1617.000	67.100	73.300				
6.630	6.0.0	.2.3	.000	.000	843.220	.000	6.000
540.000	593.200	130.733	34.700				
693.000	013.000	79.600	74.560				
873.000	934.001	P1.000	74.000				
968.030	1155.000	76.700	73.300				
1183.530	1526.300	72.330	73.500				

FIGURE 5-6. Sample Problem Card Input From Subroutine REDIN (Data Card Types 83 through 87)(Page 2 of 5).

1545.000	1619.000	70.300	71.900		,		
6.000	5.000	.000	.000	.000	043.230	.000	6.000
540.000	612.000	136.000	87.700				
704.000	756.000	110.500	78.300				
854.000	935.000	81.830	74.940				
972.000	1000.000	76.500	72.300				
1100.000	1253.400	76.000	69.100				
1567.003	1619.000	76.300	67.500				
903.030	3.060	6.000	4.000	20.000	.000	2.000	
7.633	6.000	.000	.000	.000	903.210	.000	5.000
63.000	479.000	76.130	79.100				
504.633	581.000	73.400	77.700				
603.000	919.000	70.930	78.100				
953.000	1419.000	65.300	75.800				
1434.033	1619.000	03.800	74.900				
7.000	5.600	.000	.003	.0.0	903.220	.000	5.600
60.030	402.000	77.000	78.500				
432.000	616.000	73.200	70.800				
631.000	1015.000	71.900	77.000				
1044.300	1100.000	68.230	74.740				
1130.000	1019.000	65.500	73.900				
7.303					00. 220	0.0	
	5.003	.000	.000	. 200	903.230	.000	5.000
60.333	462.000	77.900	78.303				
487.000	664.063	74.430	76.200				
674.300	991.000	73.633	75.200				
1021.003	1162.000	63.800	73.200				
1184.000	1019.566	66.200	72.400				
904.000	3.000	6.000	4.000	23.000	.000	2.000	
3.330	6.000	.3-0	.000	.000	904.216	.000	4.600
60.000	412.000	79.430	72.703				
442.300	1085.000	75.300	10.300				
110:.036	1528.300	73.200	11.200				
1557.000	1619.000	73.330	68.900				
8.000	6.000	.000	.000	.000	904.220	.000	4.000
60.000	449.000	79.906	71.700				
468.033	1141.000	76.100	69.500				
1148.000	1353.000	75.600	69.200				
1372.000	1619.000	73.600	67.000				
8.000	6.600	.000	.000	.000	904.230	.000	5.000
60.000	420.000	74.710	71.700		7011230		3.030
453.000	1213.000	76.703	69.100				
1223.000	1393.600	75.100	70.200				
1412.000	1513.000	73.300	60.600				
1520.000	1619.000	72.103	60.400				
705.000	1.000	5.000	4.000	25.000	.000	1.000	
9.000	5.000	.000	.000	.000	705.220	.000	5.000
60.000	573.000	88.530	75.900				
597.000	827.000	85.200	78.500				
801.000	925.000	45.430	77.100				
1012.000	1538.000	69.200	76.503				
1568.000	1019.000	65.300	74.100				
715.303	1.000	0.396	4.000	27.003	.000	1.060	
16.000	6.000	.006	.000	.000	715.220	.000	4.000
60.000	304.000	73.433	69.403				
316.003	1316.000	73.130	66.500				
1325.000	1474.600	72.000	67.200				
1494.000	1619.363	71.704	65.300				
725.600	1.000	6.000	4.000	28.000	.000	1.000	
11.000	6.000	.200	.000	.000	725.226	.000	7.000
60.000	87.003	80.260	63.400				
	0.,000		33.100				

FIGURE 5-6. Sample Problem Card Input From Subroutine REDIN (Data Card Types 83 through 87)(Page 3 of 5).

					1		
94.000	217.003	77.800	62.400				
223.000	376.000	77.000	62.900				
390.000	1011.000	75.400	62.300				
1021.303	1366.600	74.433	61.700				
1373.000	1440.000	73.630	61.500				
1455.333	1519.000	72.300	61.100				
751.000	3.000	6.000	4.000	29.000	.000	1.000	
12.003	0.000	.300	.000	.000	751.210	.000	5.000
63.003	146.000	81.700	60.000				
168.000	658.000	78.300	67.803				
865.000	1115.000	77.000	07.400				
1158.000	1276.000	75.000	61.300				
1312.000	1619.560	73.200	66.200				
12.000	6.500		.300	.000	721.220	.000	3.000
73.003	851.663	70.000	66.000	.010	131.220	.000	3.000
866.000	1392.000	76.530	65.703				
1406.000	1619.000	74.200	65.000				
12.060	6.000	.000		.000	751.230	.000	5.000
63.000			.000	.000	/51.230	.000	9.000
	66.000	62.900	60.703				
114.005	762.000	69.830	65.800				
436.000	1139.000	78.430	64.000				
1149.000	1314.000	77.400	63.200				
1324.603	1914.000	76.000	62.200				
752.000	3.000	6.000	4.000	32.070	.000	1.003	
13.000	5.000	.000	.000	.000	752.210	.000	8.00C
60.363	63.663	74.930	70.800				
77.360	216.000	74.900	76.700				
259.000	483.000	68.4.0	78.100				
494.000	804.000	69.200	76.500				
311.000	1055.000	67.100	76.900				
1065.000	1241.000	66.00C	75.900				
1255.000	1340.000	64.200	74.700				
1363.000	1619.000	62.200	73.800				
13.300	6.000	.000	.000	.300	754.220	.000	7.00C
60.000	133.000	74.700	77.800				
143.000	269.000	73.500	76.200				
310.000	738.000	67.600	77.300				
745.000	929.063	66.000	77.300				
936.303	1134.000	65.363	77.200				
1154.000	1353.000	61.930	75.600				
1370.000	1619.000	61.000	74.900				
13.000	6.000	.000	.300	.000	752.230	.000	6.000
60.000	74.000	74.900	76.700				
68.000	194.000	72.130	76.903				
230.000	768.000	67.000	78.300				
774.633	1177.000	67.200	78.100				
1216.000	1329.000	62.300	75.300				
1339.000	1619.000	61.800	74.200				
806.000	1.000	6.000	4.000	35.300	.000	3.000	
14.000	6.000	.000	.000	.500	636.220	.000	4.600
900.000	1097.600	119.300	83.000				
1111.000	1354.000	117.860	83.300				
1373.000	1472.000	115.000	81.900				
1407.000	1019.000	113.660	80.000				
841.000	3.000	6.300	4.303	36.000	.000	1.000	
15.300	0.000	.0.0		.000	244.210	.000	2.000
540.000	579.000	119.900	5.700				
679.300	767.363	93.700	79.200				
835.000	1004.060	73.400	76.000				
1035.000	1167.000	66.200	76.500				
		00.00					

FIGURE 5-6. Sample Problem Card Input From Subroutine REDIN (Data Card Types 83 through 87)(Page 4 of 5).

1210.000	1619.000	62.330	75.900		,		
15.000	6.000	.000	.000		641.220	.000	5.000
540.040	574.003	121.800	4.900				,.000
664.000	775.300	98.300	80.800				
855.003	1033.000	75.400	74.300				
1067.000	1124.000	73.100	74.100				
1165.000	1617.000	64.300	73.800				
15.000	2.303		.000	.000	841.230	.040	6.600
540.003	569.043	123.800	6.300	•			
661.000	733.000	101.000	79.900				
824.000	929.000	74.100	77.200				
976.003	1163.000	67.300	77.500				
1188.000	1275.060	63.900	76.500				
1262.033	1017.000	03.230	75.200				
342.000	3.000	6.006	4.000	39.000	.000	1.000	
16.000	6.000	.0.0	.6.2	.000	842.210	.000	6.000
540.000	619.0CJ	125.330	86.100				
719.333	607.600	94.100	76.600				
865.000	957.000	77.100	73.600				
985.000	1321.000	73.160	72.760				
1349.000	1507.403	69.500	71.243				
1535.000	1619.000	65.900	70.400				
15.000	6.000	.000		.000	844.220	.000	5.000
540.000	563.000	127.500	69.600				
663.000	786.000	99,300	77.100				
858.000	971.000	78.430	72.300				
1007.333	1526.000	73.160	70.500				
1555.000	1617.600	70.700	67.000				
15.000	6.000	.000	. 300	.000	842.230	.000	6.000
540.000	598.000	129,900	1.800				
693.000	761.000	105.700	70.500				
853.000	916.000	78.100	71.363				
935.000	1327.060	75.000	71.600				
1347.000	1506.000	72.100	71.500				
1535.000	1619.000	69.100	68.000				
9999.0003							

FIGURE 5-6. Sample Problem Card Input From Subroutine REDIN (Data Card Types 83 through 87)(Page 5 of 5).

```
3.63 1.00 25.00
                             .30
                                    1.00
                                             4.00
                                                     0.00
 41
         TABLES LUADED PROPERLY
                                                    30.00
1230.33
         6.33
                  1.00
                          1.00
                                    20.00
                                              1.30
                                                               8.00
                                                                       2.00 1200.00
                                                                      27.00
  83.00
                  1.00 1.00 2.00 5.00 27.00 860.00 2000.00 1000.00 2000.00
                                                               5.40
                                                                                5.00
  27.30 153...0
                                                               4.00 5000.00
3100.20
          4.33
                             2.00
                                     40.00
                                              1.00
                                                               5.00
                                                                       2.00
                    3.00
                                                     34.00
                                                                              85C.CO
 100.00
           12.30
                                      2.00
                                              5.00
                                                      27.00
                                                               5.00
                                                                      27.00
                    1.00
                             1.40
                                                                                5.40
                                                               3.00 2500.00
   27.00 1000.00
                 1200.0010000.30 1000.00 1000.3010003.00
4000.20
            2.50
                    .20
                                                               1.30
                     . 20
                              . 3 3
                                     3.00
                                              2.30
                                                     60.00
                                                                      20.30
                                                                               30.00
   2.00
                    1.00
                                              3.00
            1.00
                             1.00
                                      1.00
                                                      47.00
                                                               3.00
                                                                               3.00
   27.00
           99.30
                  200.00
                          430.00
                                  300.00 3000.003000.00
                                                               0.0699994.00
5000.25
           2.33
                   24.00
                            24.33 1333.60
                                              3.00
                                                     25.00
                                                              12.00
                                                                               90.00
   14.33
           12.00
                            12.33
                    1.30
                                      1.40
                                              3.00
                                                               0.0049999.00
                 4000.0010000.00 1000.00 4000.00 7000.00
   27.00
          600.00
                    1.00
     .13
            . 35
12000.23
            1.30
                             1.00
                                      1.30
                                              2.00
                                                     80.00
                                                               1.00
                                                                      20.00
                                                                               10.00
                   30.00
                             0.30
                                              0.30
                                                               0.00
    6.00
            ...00
                                      1.00
    3.30
            J.00
                    0.00
                            0.00
                                     0.00
                                              0..0
                                                       ...
                                                               0.00
                                                                       0.30
                                                                                C.30
    3.30
            0.00
                    0.00
13000.10
                             6.00
                                      1.00
                                              1.00
                                                     36.00
                                                              15.00
                                                                       2.00
                                                                              900.00
            6.33
                    1.56
  300.00
            0.00
                     1.20
                             0.00
                                      2.00
                                              0.30
                                                       0.00
                                                               0.30
   0.00
                    0.00
            0.00
                             0.33
                                     0.13
                                              0..0
                                                       0.00
                                                               0.00
                                                                        0.40
                                                                                0.00
            0.00
                                                                      20.00
                    43.00
                            40.00
                                     40.00
                                              2.00
                                                     16.00
                                                                              240.00
14000.20
            6..3
                                                               1.00
  720.00
                    .90
            0.33
                             0.00
                                      1.30
                                              0.00
                                                       0.00
                                                               0.00
                                                                        0.00
            0.00
                                      0.04
   0.00
                             0.03
                                              0.33
                                                      4.00
                                                               0.00
                                                                       0.30
                                                                                0.00
                     0.60
17000.30
                     2.00
                             8.00
                                                              15.00
                                                                       2.00
            6.00
            0.00
                                     2.00
                                                                                0.00
 303.00
                    1.10
                             0.00
                                              0.00
                                                      ..00
                                                               3.00
                                                                       0.30
  3.03
                                              6.00
                                                               ...
                                                                       ....
                    3.00
                             0.00
                                                      4.03
  6
        SYSTEM LOADED PROPERLY
                                     . 754
 1201.3
                                                    1200.
                            17.3
 1202.3
           . . . . .
                    .200
                                     . 754
                                               2.
                                                     1200.
 1203.3
                                                     1200.
                                     . 483
                                               2.
           . .63
                    .115
           .101
                   2.970
                            17.0
                                     .953
                                                     600.
 1204.3
 31.02.2
                   . 453
           .100
                            23.)
                                     . 750
                                                      euo.
                                     .950
                                               2.
                                                      400.
           .150
                            30.0
 3133.2
           . 130
                            22.3
                                     .980
                                                     800.
                    ·Los
 4001.2
          2.300 100.300
                                     . 750
                                                       30.
 5301.2
          .080
                   . 770
                            25.0
                                     .450
                                               1.
                                                      YC.
12001.2
                   1.333
                                                       10.
                            00.0
          1.000
                   1.000
                            30.0
                                                     9.0.
14001.2
          1.000
                   1.333
                            10.0
                                     CBF.
                                               2.
                                                     243.
17001.3
         1.000
                  1.000
                            18.0
                                     . 950
                                                      500.
         RUND LUADED PROPERLY
   3
                                DIVARIY FUC
   0.00 375.00
                  01.00
                           63.00
 920.00 1700.00
                  34.00
                           57.00
                                CORPS FOC
   0.00
                           70.00
             BN FOC BN1 XM155 DS
 715.30 1700.03
       3
   0.00 150.00
                  62.00
                           72.40
 270.01
                   01.00
 100.00
        240.03
                   53.53
                           71.50
```

FIGURE 5-7. Values of Selected Input Parameters (Page 1 of 7).

```
610.03 960.03
                               71.33
                     58.33
                               69.50
                     25.00
1120.00 1480.00
                     21.50
                               64.50
1500.00 1630.00 5
384TFERYS IN BN
                     51.20
                               66.13
                 B BTRY BNL
                                     XM155 DS
1200.33
 140.00 270.00
                      62.03
                               12.43
                                          4.00
                               71.90
                     61.80
                                          4.00
300.00 270.00
610.00 950.00
990.00 1170.00
1120.00 1480.00
                     58.50
                               71.00
                     50.00
                               71.30
                                         10.00
                                          8.30
                     >>.00
                               09.50
                     51.50
                               66.23
1500.00 1630.00
                     51.20
                               64.10
                A BIRY BHL
        0
                                    XM155 DS
1200.31
   3.33 143.33
                     63.00
 160.00 250.60
                   . 63.33
                               73.40
                                          4.00
280.00 570.00
                     00.00
                               73.00
                                          8.00
                               72.80
                                         10.00
 930.00 1150.60
                      56.50
                               71.00
                                          4.00
1100.00 1460.00
                     53.00
                               70.00
                                          4.00
7 0
                C 6TRY BN1
                               64.63
                                          4.50
                                    AM155
                                             05
1200.30
                               75.40
   0.00 123.03
                     65.00
                                          4.00
 140.00 230.60
250.00 550.00
570.00 930.00
                     01.50
                                          4.00
                               74.50
                                          8.30
                      61.00
                               74.30
                                         10.00
963.33 1130.63
                               72.50
                                          9.00
                     50.00
                     34.50
                               71.50
                               71.40
                                          4.60
1460.00 1630.00
                     34.23
7 3 8N FDC 8N2 XM155
3.00 110.00 67.20 05.60
1333.3 253.63 67.33 05.13
273.03 430.33 00.53 05.10
420.00 710.00 66.13 64.93
740.00 1103.03 02.33 04.03
1130.00 1313.63
                     61.70
1340.00 1630.00
                     50.50
                               02.50
   BATTERYS IN BN 2
                                      XM150 05
1203.30
   0.00 110.00
                               02.63
                     67.20
                                          8.30
 130.00 250.00
                     07.00
                               02.10
                                          6.00
 273.33 433.33 423.33 710.03
                     00.50
                               65.10
                                          5.03
                     01.00
                               64.90
                                          0.00
743.30 1133.03
                     02.00
                                         12.00
                               64.63
                     61.70
                               63.50
                                         10.00
1340.00 1630.00
                     20.20
                               62.50
                                         12.60
                A BIRY BNZ
                                    XM152 05
1233.30
 110.00 230.00
250.00 360.00
400.00 670.00
                      50.70
                               67.13
                     08.53
                               60.00
                                          6.00
                     68.00
                                          2.00
                               05.60
                     07.60
                               06.40
723.50 1050.03
                     63.50
                               55.10
                                         12.00
                               55.00
                                         10.00
                     63.20
1320.00 1530.00
                      50.00
                               54.00
                  C BTKY BNZ
                                    XM150
                                             20
1200.33
           13.33
   3.33
                      73.20
                               65.00
 90.00 210.00
230.00 300.00
380.00 670.00
                      70.00
                               63.13
                                          0.33
                     67.50
                               67.90
                                          5.00
                                          8.30
                     64.10
 700.00 1000.03
                      05.00
                               67.00
                                         12.00
```

FIGURE 5-7. Values of Selected Input Parameters (Page 2 of 7).

```
1040.00 1273.00
                      64.70
                                06.30
1300.00 1030.00 39.50 05.50

6 3 8N FOC 8N3 XM1

0.00 350.00 70.50 57.80

370.00 610.00 70.30 57.30

630.00 69.60 57.10

720.00 990.00 67.00 56.00
                                          12.00
                                57.83
                                             20
720.00 930.00 65.60 3
1100.00 1240.00 65.60 3
1320.00 1630.00 63.50 3
334176275 IN BN 3
0 8 8787 3N3
                                50.00
                                       XM155 DS
 3.03 393.03
                       70.30
                                27.83
                                            6.33
                                27.30
27.10
                                            2.00
630.60 640.00
720.00 990.00
L100.00 1240.00
1320.00 1630.00
                       59.60
                                            4.00
                       67.00
                                 26.00
                                            5.03
                                55.73
                       60.60
                                            8.00
                       03.20
                                            8.00
                     STRY BH3
                                      XM155
1200.30
   3.33 333.03
                       72.43
                                59.33
  353.50 270.00
                                            5.00
                       71.60
                                28.80
 613.33 0/3.33
736.03 973.03
943.03 1273.63
                       /1.30
                                 23.63
                                            4.00
                                57.50
                       53.50
                                            5.00
                       60.10
                                57.20
                                            8.00
1300.00 1530.00
                      00.00
                                57.23
                                            8.00
1200.30
                 C BIRY BN3
                                      XM155
 3.00 313.03
                       73.50
                                60.80
                                            6.00
                       73.30
                                66.00
 593.03 000.00
                                            4.00
                       72.00
                                04.10
                       70.00
                                59.00
  470.00 12.0.00
                                50.76
                                            8.00
                       04.60
                       66.20
                                            0.00
                 BN FCC BN+
 0.00 170.00
140.00 540.00
                                     MIZZA4 RETHE TO BN 2
                               57.83
                       07.20
                                07.30
 910.00 1170.00
                       67.00
                                67.14
                      00.00
                                06.80
1230.00 1630.00
                      62.50
                                64.50
    SEATTERYS IN BN
3135.50
                9 PLS 84
                                      M123A4 REINF TO BN 2
 J.30 170.0,
19J.30 593.00
610.00 896.00
                       67.70
                                67.80
                                          12.00
                      67.30
                                67.13
                                          12.00
                                            5.33
  113.00 1190.00
                      06.50
                                65.80
                      62.50 04.50
1233.30 1630.00
                                            0.00
                 A STRY BN4
                                      M123A4 REINF TU BN 2
         0
3100.20
 0.00 190.00
210.00 610.00
630.00 910.00
930.00 1220.00
                       60.20
                                          12.00
                                65.00
                       60.00
                                          12.00
                                            5.00
                       65.50
                       65.10
                                02.30
                                            5.00
1230.00 1630.00
                 C BIRY BN4 M123A4
                                            6.30
                                                REINF TO BN 2
3100.20
    3.00 210.00
                       64.70
                                64.83
 230.00 030.00 650.00 930.00
                      64.03
                                64.3J
                                          12.00
                                           5.00
  950.00 1240.00
                       63.00
1270.00 1030.00
                       24.53
                                51.50
                                            4.00
                  BN FOC BND
                                   41234+ GSK TO BN 3
         3
   6
                               .4.33
    CO.CES CO.U
                       75.00
 250.00 523.35
                      72.00
                                56.60
```

FIGURE 5-7. Values of Selected Input Parameters (Page 3 of 7).

```
973.33 1243.63
1250.06 1410.60
1443.33 1633.33
                  71.60
71.33
                            56.20
                    05.30
   38ATTERYS IN BN 5
                B BIRY BNS
                                   M123A4 GSR TO BN 3
3100.20
 3.06 230.00
250.03 520.00
553.33 953.33
                    75.40
72.00
                             54.30
                             50.00
                                       4.00
                             50.00
                                       4.00
 970.00 1230.00
                    71.60
71.36
66.33
                             56.20
                                       4.33
1230.33 1410.00
                                       6.03
1440.00 1030.00
                             56.33
                                       5.00
         0
                A STAY BAS
                                  M123A+ GSR TO BN 3
3100.23
        213.00
  3.33
                    74.10
                             J7.80
                                       4.00
 230.00
         600.00
                    73.90
                             57.33
                                       4.00
                             54.70
 630.00 410.00
                    70.20
                                       4.30
 920.00 1210.00
                    70.10
                                       4.00
1233.00 1390.00
                    64.40
                             14.30
                                       0.00
               C BINY BNS
   5
                                  M123A4 GSR TO BN 3
3100.20
 213.00 560.00
                    72.60
                             20.33
                                       4.00
                    72.40
                             53.30
                                       4.00
 590.03 710.00
                    64.00
                             53.50
                                       4.30
                    60.63
                                       4.03
1210.0. 1376.60
                    68.30
                             2.40
                                      6.00
                                       0.00
               BN FOC BN6
                                  FARSS
                                           GS AT D/A
        3
 210.00 463.30
                    60.60
 440.03 810.03
830.03 940.00
                    60.10
                             09.80
                             59.50
 970.33 1190.33
                             61.00
                    50.50
1220.00 1430.00
1460.00 1630.00 :
                    53.70
                             66.70
                      6
              BIKY BNO
         0
                                  FARSS
                                            G. AI DIA
5000.20
 213.00 190.00
                    60.00
                             73.23
                                       4.30
                             70.00
                    01.01
                                       6.40
 483.33 810.00
                    63.13
                             64.80
                                       8.00
 430.00 940.60
970.00 1190.00
                    34.70
                             69.00
                                       6.00
                             69.00
                                       5.00
1223.33 1430.00
                    55.50
                             06.20
                                  0 4.00
FARSS
1460.00 1633.30
                    53.70
                             66.70
              A BTRY BN6
                                            GS AT D/A
        ù
5000.20
 0.33 173.03
143.33 443.33
463.33 743.33
                    62.30
                             72.00
                                       3.33
                    52.10
                             71.30
7..30
                                       6.60
                                       0.00
                    01.50
410.00 420.00
420.00 117.00
1200.00 1410.00
                    61.20
                             71.00
                    57.00
                             10.50
                                       5.43
                                      10.00
1440.00 1630.00 55.20 58.20 4.00
7 3 C BTRY BN6 FARSS
                                            GS AT DIA
5000.20
   0.00 150.00
                    63.80
 170.00 420.00
                    63.60
                             73.00
                                       6.00
                                       4.00
                    63.10
                             72.80
 793.30
          +30.00
                             72.50
                                       5.33
 930.00 1100.00
                    54.50
                             72.00
                                       5.00
                    56.76
                             69.70
1130.00 1340.00
                                      10.03
1420.05 1630.00
                                       4.33
                 BN FOC BNT
                                  M12344
                                            GAR TU DIA FROM CORPS
        3
   3.3. 483.63
                            71.03
                   00.00
```

FIGURE 5-7. Values of Selected Input Parameters (Page 4 of 7).

```
500.00 753.00
                            70.50
                   64.80
 780.00 1123.00
                   54.34
                            72.50
1140.00 1310.00
                   54.00
                            72.30
                   53.70
                            71.90
   BATTERYS IN BN
   5
                                  M12344
                                             GSR TO U/A FROM CORPS
3100.20
300.20
30.00
480.00
780.00
780.00
1120.00
1140.00
1310.00
1330.00
                   65.30
                            71.00
                                      7.00
                    64.80
                             70.00
                                      3.00
                   54.50
54.33
53.70
                            72.50
                                     11.00
                            72.30
                                    7.00
                            71.90
3100.23
                A BTRY BN7
                                  M12344
                                             GSR TO J/A FRUM CORPS
 0.00 403.30
400.00 730.00
                   63.+1
                            59.53
                                      1.33
                            71.00
                    03.30
                                      3.00
760.00 1130.00
                   53.00
                                     11.00
                            73.83
                                      4.00
3 0 C BIKY
                            73.40
                    24.23
                        347
                                             GIR TO DIA FROM CORPS
3100.20
   U.U0 440.00
                   62.00
                                      7.00
                            60.00
 460.00 713.00
                   61.80
                            67.50
                                      3.00
 740.00 1,00.03
                    21.50
                            59.50
1100.00 1270.00
                   51.00
                                      0.00
                            69.30
                            58.90
              BN FDC BNB
                                SPEAR
                                        GS AT CURPS
   0.03 1630.03 57.50
E NB NJ ZYSTIAES
                            65.63
              A BTRY BNB
                                SPEAR GS AT CORPS
4000.20
                               SPEAR CO
  1 0 6
                            00.00
                   57.50
              BIRY 348
                                       GS AT CURPS
4000.20
   3.30 1033.00 65.00 55.03
                                      3.00
  23
      10
         FORSIZ .
                     100.5
  13
       15
  55.00
          83.30
                   69.00
                            77.03
                                     73.00
                                              74.00
                                                       74.00
                                                               71.00
                                                                        76.00
                                                                                 68.30
  70.33
                    79.00
                                     80.30
                                              74.00
                                                                        79.00
           33.30
                            62.00
                                                       74.33
                                                               71.00
                                                                                 53.00
   55.00
           00.00
                    60.00
                                     68.00
                                                                        73.00
                                     77.00
  73.00
           00.00
                    76.00
                            02.43
                                              54.60
                                                       74.00
                                                                56.30
                                                                        79.00
                                                                                 53.00
                            17.33
  54.00
           30.00
                    04.30
                                              74.53
                                                       70.36
                                                                71.00
                                                                        72.00
                                                                                 68.00
   73.33
           65.00
                    76.00
                            62.03
                                     76.33
                                              54.00
                                                                         79.30
                                                                                 53.00
                                                       79.40
                                                                56.30
           00.00
  64.30
                    64.00
                            77.46
                                     66.33
                                              74.00
                                                       74.30
                                                                71.00
                                                                                 68.00
  73.00
                    75.00
                            52.00
                                     75.00
                                              59.00
                                                       79.33
                                                               56.00
                                                                         79.00
                                                                                 53.00
                            77.00
  63.00
                    64.00
                                                       70.00
           00.00
                                     66.00
                                              74.60
                                                                71.06
                                                                        71.00
                                                                                 68.00
                    75.00
                                     75.00
                                              59.00
  73.00
           35.33
                            62.00
                                                       70.00
                                                                56.00
                                                                         75.00
                                                                                 53.00
  62.33
           00.13
                    53.33
                            77.00
                                     64.00
                                              74.60
                                                       59.10
                                                                71.00
                                                                        70.00
  72.33
           00.00
                    71.00
                            02.00
                                     74.00
                                              59.04
                                                       73.00
                                                                71.00
                                                                        75.00
                                                                                 53.00
                    62.30
                            71.00
                                              74.00
  61.00
           80.00
                                     61.50
                                                                         70.00
                                                                                 60.00
  72.33
                            17.60
                                                                                 23.33
           00.00
                    73.33
                                                       70.00
                                                                56.30
           50.00
                    62.00
                                     54.30
                                              74.00
                                                       73.60
                                                                71.0.
                                                                        u2.0.
                                                                                 68.30
                                              59.03
                                                                         75.00
   70.00
                                                                                 53.00
           62.0.
                            62.44
                                                                56.70
                                              74.63
54.63
74.03
                                                       29.33
  00.33
           00.33
                            77.00
                                     58.00
                                                                71.00
                    61.00
                                                                        01.30
           05.00
                                     11.00
                                                                                 69.00
  64.00
                    73.03
                            02.60
                                                               36.JC
                                                                         75.40
                             77.00
                                                                        29.00
  50.00
                    51.33
                                                       50.00
                                                                71.00
  65.00
                    73.30
                                     70.03
                                                       71.33
                            62.43
                                                                26.33
            .0010
                  0100. 0100. 0100. 0100.
                                                   .0010 .0010 .00102.000 .500
   3 .0-13
                                              6010
                                         1.
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FIGURE 5-7. Values of Selected Input Parameters (Page 5 of 7).

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8			56.	1770.		74.	200.	944	. 1	504.
9	1239.		76.	1704.	19	82.	943.	972		346.
10	197.			1216.		41.	721.			146.
11	172.		144.	6925.	10	10.	200.	179		497.
12	607.		57.	19/0.		91.	824.	70	٠,	580. 793.
13	.39.		74.	520.	10	71.	117.	450		743.
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15	47.		73.	2244.			219.	284 36 999 3644		714.
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19	1222.		60.	2404.	,	12.	943.	717	• ;	769. 767.
20	930.		12.	1672.		75.	622.			312.
21	1304.		112.	325.	5	36.	950.	359	,	941.
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. 33	.33	5.50	0.00	. 25	.20	. 24	.14	1.07	. 38	
1.00	.33	1.25	1.47	1.40	1.00	4.30	4.03	4.00	1.31	1.31
1.65	4.05	13.00	0.00	.60	.50	.24	. 25	2.02	.73	
.23	.27	1.35	1.27	1.20	.75	.63	.60	.07	.25	.25
. 33		3.50	6.33	. 25	.28	. 24	.34	1.07	. 38	
1.33	.33	1.25	1.47	1.40	1.00	4.00	4.40	4.00	1.31	1.31
1.00			0.00		.50	.24	. >>	2.02		
.28		. 30	1.07	1.30	.55 .25 1.00 .75 .28 1.00	.00	.60	.60	. 45	.25
. 13	.33	1.25	0.11	1.45	.25	.24	.14	1.07 4.00 2.02 .65 1.07 4.00	. 38	
1.30	.33	1.45	2.33	1.40	1.00	4.33	4.00	4.00	1.31	1.31
1.05	1.00				• > 0	.24	.55 .63 .34	2.02	.73	
.28	.27	1.30	1.27	1.20	. 75	.60	.63	.60	. 25	.25
. 33		5.20	6.30	. 65	.28	.24	. 34	1.07	.38	
1.00	.33	1.25	1.47	1.45	1.50	4.30	4.00	4.00	1.31	1.31
1.05	1.55	13.33	1.07	.00		.24	.55 .63	2.02	. 73	
.28	.21	5.50		1.00	.25	.00	.00	.00	. 25	.25
1.00			1.47	1.45	1 10	.24	.14	1.07	. 36	1 21
1.05		13.00	0.00	.65	1.50	4.33	4.50	7.00	7.31	1.31
.29		1.00	1.27	1.23	.50 .7, .2d 1.00	63	. 55	6.02	• /3	2
. 33		5.00		. 25	. 24	24	.34	1.07	. 20	
1.33		1.25	1.47	1.45	1.00	4.00	4 . 2 . 1	4.00	1.31	1 - 31
1.55	1.00		0.00	.05	.53	.24	-55	2.02	. 73	1.31
.20		.60	1.07	1.00	. 55	.63	- 64	.64	.25	. 22
.33	.33	5.00	0.00	.20	.25	4	.14	1.07	. 38	
1.00	.33	1.25	1.47	4.45	1.00	4.40	4.0.	4.00	1.31	1.31
1.05		13.06	0.00	. 05		.24	.52	1.07 4.00 2.02 6.60 1.07 4.00 2.60 1.07 4.00 2.02 6.01	.73	
.23		1.00	1.27	1.20	. 75	.60	.63	.60	.20	.25
. 33	.33	5.50	6.43	.25	.28	.24	.34	1.37	.30	
1.00	. 13	1.25	1.47	1.43				4.00	1.31	1.31
1.65	1.05	13.30	U.3-				.55		.73	12/2020
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L	432	4134								
4.0	000 1	.0600	10.000							

FIGURE 5-7. Values of Selected Input Parameters (Page 6 of 7).

2.3000	2.0060	11.0000				
4.3333	1.3333	12.000				
5.0000	12.0000	13.0000				
755.6000	4	1.0000	5.0000	1.0000	0.0000	2.0000
901.0000	3.0000	6.0000	6.0300	5.0200	6.00.0	1.0000
902.0000	3	6.0.00	6. 4300	8.0000	0.0000	1.0000
763.3333	3.0000	6.0000	7.0000	11.6000	0.3030	2.0000
753.0000	3.3000	6.3333	8.0000	14.0000	0.000	1.0000
841.0000	3.3000	6.0000	8.0000	17.0000	0.0000	1.000
9-3.6000	3.0000	6.0000	8.2000	20.6300	0.0000	2.0000
934.3633	3.0000	6.0000	8.23.3	23.0000	0.0000	2.6000
705.0000	1.0000	0.3.0.	0.0000	20. 4340	0.0000	1.0000
713.3033	1.0000	6.0000	4.0000	27.6303	3.0000	1.0000
725.0000	1.0000	6.3000	0.0000	28.0300	0.0336	1.0000
751.0000	3.3000	6.0000	8.0000	29.0000	0.0000	1.0000
752.3333	3.0000	6.000-	8.33.3	32.0000	0.0000	1.0000
436.0303	1.3000	6.0000	8.0000	35.03.0	3.0306	3
841.5333	3.0000	0.0000	8.03.0	30.6360	0.0000	1.0000
342.0303	3.0300	6.0000	6.0000	39.0000	0.0000	1.0000
9949.5333	0.0000	0.0000	4.0000	0.0.00	0.0000	6.6000
	4.3003 5.0003 755.0003 902.0003 763.0003 763.0003 903.0003 903.0003 705.0003 715.0003 752.0003 752.0003 841.0003 752.0003 841.0003 841.0003 841.0003 841.0003 841.0003 841.0003	4.5503 1.5003 5.0000 12.0000 755.6000 4.000 901.0000 3.0000 763.0000 3.0000 753.0000 3.0000 903.0000 3.0000 903.0000 3.0000 903.0000 1.0000 705.0000 1.0000	1.0000 1.0000 13.0000 13.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 750000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 752.0000 1.0000 6.0000 6.0000 752.0000 1.0000 6.0000 6.0000 752.0000 1.0000 6.0000 6.0000 752.0000 1.0000 6.0000 6.0000 752.0000 1.0000 6.0000 6.0000 752.0000 1.0000 6	\$.0000 1.0000 1.0000 8.0000 752.0000 1.0000 8.0000 752.0000 1.0000 6.0000 8.0000 752.0000 1.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 1.0000 6.0000 8.0000 752.0000 1.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000 752.0000 3.0000 6.0000 8.0000	1.0000 12.0000 13.0000 5.0000 1.0000 901.0000 3.0000 6.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 11.0000 7.0000 7.0000 11.0000 7.00000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.00000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.0000 7.00000 7.00000 7.00000 7.00000 7.0000 7.0000 7.0000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000 7.00000000	\$1.000

FIGURE 5-7. Values of Selected Input Parameters (Page 7 of 7).

																											0000
		TOTAL	7905.61	45.15	101.69	45.64	6.6	.39	4.98	757		2537.00	96.00	36.00	342.00	804.00	00.0	4.00	00.0	0.00	3619.00	330.78	2289.55				
		BM 11	0.0	0000	00.00	00.0	0.00	00.0	00.0	•		00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.00	00.00	00.00	0.0				DIA FOC BUSY DIA FOC DUT CORPS FOC BUSY CORPS FOC DUT
		8 10	0.00	0.0	00.0	00.0	0.00	0.00	0.00	•		0.00	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.00	00.0	0.00				DIA FO DIA FO CORPS CORPS
		6 X 9	00.0	000	00.0	00.0	00.00	00.0	00.00	•		00.00	00.0	00.0	00.0	00.0	00.0	00.0	00.0	0,0	00.0	00.0	00.0			REASONS	
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	DIAL	P × 8	1011.29	273.50	5.91	26.09	50.6	0.00	00.0	40	S T V	0.00	00.0	00.0	00.0	572.00	00.0	4.00	00.0	0.00	576.00	57.60	258.12	. 0311	5 1 4		A440
	NOI	z e	00.0	000	00.00	00.0	0.00	00.0	00.0	•	1010	0.00	00.0	00.0	0.00	00.0	00.0	00.0	00.0	00.0	0.00	0.00	00.0	TRUCKS KILLED	ISHED		BATTERY BUSY BIRY DUT OF BN FDC BUSY BN FDC DUT
SAMPLE CASE	ATTAL	S NO	543.12	00.00	2.88	3.43	1.16	00.0	00.0	13	200	0.00	00.0	0.00	00.0	152.00	0.00	00.0	03.0	00.0	152.00	15.20	68.40	70.02	7 4 11 0 :		
SAS	•	, z	253.88	74.01	. 95	1.92	.13	00.0	00.0	20		0.00	00.0	00.0	00.0	96.00	00.0	00.0	00.0	00.7	80.00	8.00	36.00	KILLED .	2 V V D		000000
		m × m	~	•				.39				929.00	48.00	36.00	00.86	00.0	00.00	00.0	00.0	0000	1111.00	91.20	654.95	37.81 APCS KILLED		, b	ADED
IOURS		8N 2	1720.44	18.00	42.99	14.61	2.30	00.0	1.55	95		966.00	48.00	00.0	149.00	00.0	00.0	00.0	00.0	00.0	1163.03	97.18	790.23	KILLED .		MISSION TYPE	NAN DRUPPED - QUE OVERLOADED TAKETO DEFORE FIRED GGTS DRUPPED-ALL USSY SCHED PLAN MSN CANT DO HOUSEKEPING MSN CANT DO TGT OUT OF RANGE OF ALL UNITS
9. HOU			1668.47	10.00	13.27	5.14	00.0	0.00	00.0	?		942.00	00.3	00.0	45.00	00.0	0.00	0.00	0.00	00.0	737.60	01.60	506.85	93. TANKS KI			NSN DRUPPED - QUE DVER TAKEET DEPARTED AEFDRE TGIS OROPPED-ALL BUSY SCHED PLAN MSN CANT DO HOUSEKEEPING MSN CANT TGI DUT OF RANGE OF ALL
GANE TINE .			ARTY MIL WORTH	TANKS	APCS	TAUCKS	TUBES	RADARS	LNCHRS	BIRY FIRE MSNS	RND ID	1201.30	1202.30	1203.30	1204.30	3101.20	3102.20	3103.20	4001.20	2001.20	TOTAL RNDS		TOTAL COST	NO. HSNS . 93.			NSN DR TAKGET 1G1S D SCHED SCHED 1G1 DU 1G1 DU

FIGURE 5-8. Scenario Results After 9 Hours of Game Time (Page 1 of 5).

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	PLAN	17.		E 08888341			11		N0000	*0900	4900	00 00 00	
		•		32			. H		140.00 0.00 0.00 0.00	70000 00000	0000	*	
	TOTALS N-08S			PROCESS			-		- "	•	•		
	= 1	21					01	2000	10000	£0000	2000	200 00 00 0	• •
	~	200		G G			z	0000	530.00 0.00 0.00	40.00 0.00 0.00	0.00	00 00 00	• •
	088	173		-					• •	• •	•		
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	PLAN	°。;		ė			2	0000	524. 3.	20000	2000	,	• •
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	(10 - 0.5) N-085 P	°。;		20000000			Z	39.45	56.99 63.01 0.00	18721 28.00 12.00 0.00 5.56	2000	00 00 00 0	•
	21			423.20 423.20 423.20 423.20 423.20 423.20 211.60				•	# 50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	818 28 512 0	4	00 00 00 0	
		· ·		7 22222			~	.95				7	
	90	777					Z	527	75.49 64.51 0.00 11.53	41.67 41.67 496.33 0.60 5.56	8732 0.00 0.00	200000	• •
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-	PLAN	-00	4	RSHS	LED	E	8	2401		• •		121	• •
E	~				SCHEDULED	-	~	9100	3.23 6.77 6.03	181 0000 0000 0000	8728 0.00 0.00		
	-082	35.0		Q Z	SC		z	59.34	81814 153.23 386.77 0.00 48.89	20000	2000	00 00 00	
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		-		000000000000000000000000000000000000000	CO.			7 4 7	- 4 5 5	7447	7 4 5 ×		
		BN FIRE MSN MSNS DFIED ARIY MM		100001 100001 100001 100001	PLAN SCORE.			MINUTES BUSY MINUTES TOLE MIN UUT - RAM PERCENT BUSY	BUST FELE BUST	BUSY IDLE RAM BUSY	MINUTES BUSY MINUTES TOLE MIN OUT - KAM PERCENT BUSY	7 250 350 350	
		IRE OF						TES.	ENERGE	FALLE	EN TES	1201.30 1201.30 1201.30 1202.30 1203.30 1203.30	1204.30
		SNS		¥ - 1 - 1 - 1 - 1 - 1 - 1	INE			MINUTES MINUTES MINUTES	MINUTES MINUTES MIN OUT	MINUTES MINUTES MIN UUT	MINUTES HIN OUT	1201.30 1201.30 1201.30 1202.30 1203.30 1203.30	120
				•	-			EEEa	EEEA	EEEC	EEE		

FIGURE 5-8. Scenario Results After 9 Hours of Game Time (Page 2 of 5).

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FIGURE 5-8. Scenario Results After 9 Hours of Game Time (Page 3 of 5).

DATA BREAKDOWN BY SYSTEM

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		477.65	0.00	00.0	0.00	0.00	145.61	0.0	0.00	0.00	417.65
	0.00	135.99	00.0	00.0	00.0	00.0	10.84	00.0	0.00	0.00	135.99
	00.00 00.00	34.26	0.00	00.0	0.00	0.00	31.44	00.0	0.00	0.00	34.20
	00.0	3.55	00.0	0.00	00.0	00.0	6.34	0.00	0.00		
	0.00 00.00	.39	00.0	00.0	0.00	0.00	00.0	0.00	00.0		.39
00.0	00.00	4.98	00.0	00.0	0.00	00.0		0.00	0.00		
00.0	00.00	193.00	00.0	00.0	0.00	0.00	00.19	0.00	0.00	00.0	193.00
00.0	0.00	3011.60	00.0	00.0	0.00	0.00	808.00	0.00	0.00	0.00	3011.00
0	00.0 00.0	249.96		00.0	00.0	00.0	80.80	0.00	0.00	0.00	249.98
0	0.00 0.00	1927.03		0.00		0.00	362.52	0.00	0.00	00.0	1927.03
0.00	0.00	25.00		0.00		0.00	9.00	00.0	0.00	00.0	25.00
0	0.00 00.0	1.00	0.00	0.00		00.0	00.0	0.00	0.00	0.00	1.00
0.00		3.00	00.0	00.0	0.00	0.00	00.0	0.00	0.00	0.00	3.00
9	00.00 00.00	51.00	0.00	0.00	00.0	0.00	36.00	4.00	9.00	0.00	\$1.00
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HOURLY FORCE AVAILABILITY . . 970

FIGURE 5-8. Scenario Results After 9 Hours of Game Time (Page 4 of 5).

				GARS BREAKDOWN										
	Air	AIL ala	Pers	TANKS		TRUCKS	TUBES	RADARS	LNCHRS RE	RDS FIRED	0 80	194	RD COST	MSN FRD
, z		0.000	3.000	600.0	c.00.	0.000	000.0	00000	0.000		0.000	0:00	0.300	0.000
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0 Z		00000	0.00	0.333	0.000	000.0	0.000	00000	3.000	•	000.0	0.000	0.000	0.000
2 NG		0.000	0.000	0.000	22.0	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
0 × 00		0.000	0.000	003	3.60.	0.000	0.000	0.000	0.000		0000	00000	0.000	000.0
0 NB		0.000	0.000	0.000	000.0	0.000	00000	000.0	0.000	3	0,000	000.0	0.000	0.000
8 NI C		0.000	0.30	0.000	0.0.0	0.000	007.0	000.0	0.000	•	0.000	000.0	0.000	0.000
BALL		00000	0.000	00000	0.00	000.0	0.000	0.000	00000	•	0.000	00000	0.000	0.000
TOTAL		0.000	2000	0.000	0.00	0.00	0.000	0.000	0.000	•	0.000	000.0	0.000	0.000

FIGURE 5-8. Scenario Results After 9 Hours of Game Time (Page 5 of 5).

																													0000
		TOTAL	-	1764.69		149.96					470			5635.00	96.00	36.00	515.00	1537.00	00.0	12.00	00.0	24.00	7855.00		4242.71				
		11 H	0.00	0.00	0.0	00.0	0.00	00.00	00.0	00.0	•			00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	0.00	00.0	0.00				DIA FOC BUSY DIA FOC DUT CORPS FOC BUSY CORPS FOC DUT
		BN 10	00.0	00.0	00.0	00.0	00.00	00.00	00.0	00.0	•			00.00	00.0	00.0	00.0	00.0	00.0	00.0	00.0	0.00	00.0	00.0	0.00				DIA FD CORPS CORPS
		e z	00.0	0.00	00.0	0.00	00.0	00.0	00.0	0	•			0.00	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	0.0			REASONS	
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	TOTAL	5 NG	2223.10	561.29	1.12	96.6	43.83	8.38	00.0		78		S 7 V L	00.0	00.0	00.00	00.0	1005.00	00.0	12.00	00.0	00.0	1017.00	101.76	454.41	117.60 -	3 1 1 5		F ANNO .
w	1 1 0 N	9 X 0		30.98							-		N 0 1 0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	00.0	24.00	24.00		23.76	8 TRUCKS KILLED	LISHE		BATTERY SUSY BIRY DUT OF A BN FDC BUSY BN FDC DUT
SAMPLE CASE	ATTAL	S N S	849.58	27							28		n 0 &	00.0	00.0	00.0	00.0	376.00	00.0	00.00	00.0	00.0	376.00		-	 . 97.08	* N O O		
8	•	7 20	422.01	39.94							16			00.00	00.0	00.0	00.0	156.00	00.0	00.0	00.0	00.00	156.00			S KILLED	4 2 3		000000
		BN 3	4057.43	~							106			1513.00	48.00	36.00	150.00	00.0	00.0	00.3	00.0	00.0	1747.00	143.75	966.79	61.88 APCS KILLED		19E	
DURS		9 N	2226.37	330.12	25.65	55.40	28.56	1.03	00.0	2 33	130	FEEATED		2078.00	48.00	00.0	185.00	00.0	00.0	00.0	00.0	00.0	2311.00		-	KILLED .		HISSION TYPE	OUE OVERLO ED BEFORE F NLL BUSY N CANT DO 1SN CANT DO 1GE OF ALL
18. HOL		T NO	3992,61	260.26	41.53	26.24	34.48	1.67	35	2.51	Ħ	13 066	•	2044.00	00.0	00.0	180.00	0.00	00.0	0.00	00.0	. 00.0	2224.00	183.74	1250.00			-	MSW DROPPED — QUE OVERLOADED TARGET DEFARTED BEFORE FIRED TGTS DROPPED-ALL BUSY SCHED PLAN ANS CANT DO HOUSEKEEPING MSW CANT DD TGT OUT DF RANGE OF ALL UNITS
GAME TIME .			ARTY MIL WORTH	PERSONNEL	TANKS	APCS	TRUCKS	TURES	RADAGE	00707	BTRY FIRE MSNS	BATTERY NO.	AND ID	1201.30	1202,30	1203.30	1204.30	3101.20	3102.20	3103.20	4001.20	5001.20	TOTAL RNDS	TOTAL WGT		NO. MSNS . 138. TANKS			MSN DR TARGET TGTS O SCHED HOUSEK TGT OU

FIGURE 5-9. Scenario Results After 18 Hours of Game Time (Page 1 of 5).

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FIGURE 5-9. Scenario Results After 18 Hours of Game Time (Page 2 of 5).

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RELIABILITY/ATTRITION DATA

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TUAL ACO . 36	PERCENT DROPPED - 0.00						
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FIGURE 5-9. Scenario Results After 18 Hours of Game Time (Page 3 of 5).

DATA BREAKOOWN BY SYSTEM

TOTISS	10276.41	154.13	210.25	94.64	8.56	96.	• • •	347.00	6282.00	516.39	3525.14	43.00	00.9	00.6	43.00	.91	
9100	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00	
2000	42.24	30.48	.53	2.76	9.	0.00	0.00	1.00	24.00	1.92		0.00	00.0	0.00	00.0	1.00	
4000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.00	00.00	0.00	00.0	00.0	4.00	1.00	
3100	3494.69	876.86	10.25	59.11	12.08	00.0	0.00	122.00	1549.00	154.90	693.81	15.00	00.0	2,00	35.00	86.	
2000	0.00	0.00	00.0	00.0	0.00	0.00	0.00	00.0	00.0	00.0	00.0	0.00	00.0	0.00	00.0	00.0	
1500	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	00.0	00.0	0.00	00.0	0.00	00.00	00.0	
1400	0.00	00.0	00.0	0.00	00.0	00.0	0.00	00.0	00.0	00.0	0.00	00.0	00.0	00.0	00.0	00.0	
1300	00.0	0.00	00.0	0.00	00.0	00.0	0.00	0.00	0.00	0.00	00.0	00.0	00.0	00.0	00.0	00.0	
1200	10276.41	856.83	210.25	84.64	8.56	96.	6.49	347.00	6282.00	518.39	3525.14	43.00	90.9	30.6	43.00	.91	
1100	0.00	00.0	00.00	00.00	00.0	00.00	00.0	00.0	00.00	00.0	00.00	00.0	00.00	00.0	00.0	00.00	
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		PERS	ARHOR	TRUCK	TUBES	RADAR	LNCHR	BITHS	RD FR	RD WG	ROCST	INFIR	ATTRI	RAMS	10650	AVG A	

HOURLY FORCE AVAILABILITY - .880

FIGURE 5-9. Scenario Results After 18 Hours of Game Time (Page 4 of 5).

	MIL	HTW	PERS	GSRS BREAKDOWN TANKS APCS	APCS	TRUCKS	TUBES	RADARS	LNCHRS RDS	FIRED	KO .	NGT RI	RD COST	MSN FRD	0
		00000		00000	0.000	0.000	00000	0.000	0.000	0.000		0.000	0.000	0.0	000.0
8 × 5		0.000		00000	00000	000.0	00000	00000	0.000	0.000		0.000	00000	0.0	00000
8 N 6		45.239		0.000	.530	2.764	165.	0.000	0.000	24.000		1.920	23.760	1.0	1.000
5 NB		00000		00000	0.000	000.0	0.000	000.0	0.000	00000		0.000	0.000	0.0	000.0
BN		00000		00000	0.000	000.0	000.0	00000	000.0	0.000		0.000	000.0	0.0	000.0
6 NB		0.000		000.0	0.000	0.000	00000	00000	00000	0.000		0.000	000.0	0.000	00
8410		000.0		00000	0.000	0.000	00000	0.000	0.000	000.0		0.000	0.000	0.0	000.0
6N11		. 0000 0	0.000	000*0	0.000	0.000	0.000	00000	0.000	00000		0.000	000.0	0.0	00000
TOTAL		42.239	30.984	00000	.530	2.764	165.	0.000	0.000	24.000		1.920	23.760	1.000	8

FIGURE 5-9. Scenario Results After 18 Hours of Game Time (Page 5 of 5).

							0000
		TOTAL	2028.64 2028.64 117.12 170.19 158.85 22.73 1.15 6.54		96.00 36.00 470.00 1741.00 12.00	24.00 9343.00 806.74 \$207.51	
		=	00000000		0000000	0000	\$_
		Bh 11	6666363		00000000	0000	D/A FDC BUSY D/A FDC GUSY CORPS FDC GUSY CORPS FDC GUIT
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			************		00000000	0000	N V V V V V V V V V V V V V V V V V V V
	•	:	0000000		0000000	6000 6000 7E	* 30.50
	TOTAL	P N 2	2336.22 26.64 26.64 26.64 45.38 66.00 67 67	101418	0.00 0.00 0.00 0.00 112.900 0.00 0.00	1141.00 1141.00 114.10 510.21	S
	1 0 x	Z	700 N C C C C C C C C C C C C C C C C C C	0	00000000	0.00 24.00 1141. 44.80 1.92 114. 01.60 23.76 510. C L G P T D T A L	L I S H E O M BATTERY BUSY BR FOC BUSY BN FOC DUT
SAMPLE CASE	BATTALION	8 N	315-10 315-10 35-72 13-06 3-79 0-00	9	0000000	44.80 44.80 201.60 C L 6 P	C O N P L I S H BATTERY BRIRY DUTY BN FOC D
š	•	3	00 14 00 00 14 00 00 00 00 00 00 00 00		00000000		u 4 0000000 x
		E NO	4186.70 315.34 111.15 63.35 23.02 3.33 3.33 123		1743.00 48.00 170.00 00.00 00.00	1907.00 164.00 164.40 164.00 1126.69 73.86	RED IRED INTER
URS		5 X8	A 445.044 M 445.044 M 645.044 M 645.044	DEFEATED DEFEATED OFFEATED	2450.00	2719.00 2719.00 224.66 1523.47	MISSION TYPE MSW DRUPPED — QUE DVERLOADED TIRGÉT DEPARTED BEFORE FIRED TGTS DRUPPED-ALL BUSY SCHED PLAN TAN CANT DO HOUSEKEEPING MSW CANT DO TGT OUT OF RANGE OF ALL UNITS
27. HOURS			4535.52 361.80 89.49 32.07 39.64 1.67 2.52 2.52	13 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2621.00	2400.00 2400.00 1745.98	MISSION MEN DROPPED — QUE DVERI MEGET DEPARTED BEFORE TOTS ORUPPED-ALL BUSY SCHED PLAN MSN CANT OF HOUSEKEPING MSN CANT TOT DUT OF RANGE OF ALL
GAME TIME .			PERSONNEL TANKS APCS TAUCKS TUCKS TUCKS RADAKS RADAKS LNCHRS ETRY FIRE MSNS	BATTERY NO. BATTERY NO. BATTERY NO.	1201.30 1202.30 1203.30 1204.30 3101.20 3102.20 3103.20 6001.20	101AL RAUS 2400.00 2719. 101AL UST 240.48 224. 101AL UST 1745.98 1523. NO. MSNS - 179. TANKS KILLED -	ASK DE LECTOR DE SCHEO SCHEO TOTO DE T

FIGURE 5-10. Scenario Results After 27 Hours; End of Game (Page 1 of 5).

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FIGURE 5-10. Scenario Results After 27 Hours; End of Game (Page 2 of 5).

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FIGURE 5-10. Scenario Results After 27 Hours; End of Game (Page 3 of 5).

DATA BREAKDOWN BY SYSTEM

	200	1100	1200	1300	1400	1500	2000	3100	4000	2000	2100	101155
A VTH	0.00	0.00	11177.46	00.0	0.00	00.0	0.00	3650.28	0.00	42.24	00.0	11177.46
PERS	0.00	0.00	1053.19	00.0	00.0	0.00	0.00	44.47	0.00	30.98	0.00	1053.19
AKNOK	0.00	0.00	272.32	00.0	00.0	00.0	0.00	22.46	0.00	.53	0.00	212.32
TRUCK	0.00	0.00	93.20	00.00	00.0	0.00	0.00	65.89	0.00	2.76	0.00	93.20
TUBES	0.00	00.0	4.46	00.0	00.0	0.00	0.00	12.73	00.0	09.	0.00	05.6
RADAK	0.00	0.00	1.15	0.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	1.19
LNCHR	0.00	0.00	9.54	00.00	00.0	0.00	0.00	0.00	0.00	0.00	0.00	6.54
BIYMS	00.0	0.00	436.06	00.0	00.0	00.0	0.00	137.00	0.00	1.00	0.00	436.00
RO FR	0.00	00.0	7616.00	0.00	00.0	0.00	0.00	1753.00		24.00	0.00	7616.00
RO 16	0.00	00.00	659.54		0.00	00.0	0.00	175.30	0.00	1.92	0.00	629.54
ROCST	0.00	0.00	4398.14	00.0		0.00	0.00	785.61	0.00	23.76	0.00	4396.14
INFIR	0.00	0.00	52.00			00.0	0.00	16.00	0.00	0.00	0.00	95.00
ATTPL	00.0	0.00	00.9	00.0	00.00	0.00	00.0	00.0	0.00	0.00	0.00	00.4
RAMS	00.0	00.0	14.00	0.00	00.00	0.00	0.00	2.00	0.00	00.0	0.00	14.00
TUBSU	03.0	00.0	41.00	0.00	00.0	0.00	0.00	36.00	4.00	6.00	0.00	41.00
446 4	0.00	00.0	.85	00.00	00.0	00.0	0.00	60.	1.00	1.00	0.00	98.

MILITARY WORTH HOURS . 262310.11

AVERAGE FORCE AVAILABILITY . .9226

HUURLY FORCE AVAILABILITY - .870

FIGURE 5-10. Scenario Results After 27 Hours; End of Game (Page 4 of 5).

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MSM	٠	Ī	_			٠	Ĭ	٠	-
RD COST	0.000	0.000	23.760	0.00	0.00	0.000	0.00	0.00	23.760
194	0.00	0.000	1.920	0.000	0.000	0.000	0.000	0.000	1.920
2.									
FIRED	0.00	0.000	24.000	0.00	0.000	0.00	0.000	0.000	24.000
202	8	. 00	00	8	8	0	0	8	0
LNCHRS	000.3	0.000	000.0	0.000	0.00	000.0	0.000	0.00	0.00
RADARS	0.00	0.000	0.000	0.000	0.000		0.000	00000	0.000
TUBES	0.00	0.000	.597	0.00	0.00	0.000	00000	00000	.597
RUCKS	0.000	0.000	2.764	00000	000.0	00000	0.000	0.000	2.764
BREAKDOWN APCS TO	00000	0.000	.530	0.000	0.000	0.000	0.000	0.000	.530
GSRS BREAD	0.000	0.000	00000	0.000	0.000		0.000	00000	0,000
PERS	0.000	0.000	30.00	000.0	0.000	000.0	0.000	0.00	30.00
HIL WIH	00000	0.000	45.239	0.000	0.000	0.000	0.000	0.000	42.239
•	, ,	S NB	0 2 2	5 NB	8 N 8	6 NO	BNIO	BM11	TOTAL

Scenario Results After 27 Hours; End of Game (Page 5 of 5). FIGURE 5-10.

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1.0		0 0			•			9	3.0	3.0	3.0	3.0	9 0			0	1.0	1.0	1.0	1:0	1.0	3.0	3.0	-	0.1			0	3.0	3.0	3.0	1:0	9.0	2 .		3.0	3.0	1.0	3.0	1.0	0.1	•			3.0	1.0	3.0	3.0	3.0	1:0	3.0		
0.0	5.0	2.0	2.0	2.0	5.0	2.0		2.0	0.0	0:0	2.0	0				2	2.0	2.0	2.0	5.0	5.0	0:0	0.0	2.0	2.0	2.0		0	0	0.0	0.0	5.0	0.0	9		0	0.0	2.0	0.0	0	0				0	0.0	0.0	0.0	0:0	0.0	0.0		
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000	0.0	0.0		0.0	0.0	0.0	2.0	2.0	0.2	13.0	11.0		0.			0 0	0.0	0.0	0.5	0.0	0.0	11.0	3.0	0.	0 .			1.0	2.0	5.0	7.0	0.1	2.0	2.0	2.0	2.0	2.0	1.0	10.0	3.0	0.1	•		2.0	2.0	1.0	0.2	7.0	7.0	0.0	•	•	
0.00	3.0	•	9.0	0.4	9.0	•	2.0	0	0.0	0.0	0.0	0.0	•				2.0	4.0	0.4	2.0	4.0	0.0	2.0	0.0	•			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0	0.0	0.0	0.0	0.0			0	3	0.0	0.0	0.0	0.0	0	0.0	000	•	
16.0	12.	20.	12.	20.	12.0	20.0	30.0	18.0	55.0	34.0	51.	82.	0.28		•	16.0	24.0	16.0	16.0	54.0	16.0	51.0	0.4	0.4	•		3.0	3.0	55.0	55.0	95.0		22.0	25.0	5.0	55.0	55.0	8	107.0	31.0	0.22	0.33	25.0	55.0	55.0	6.0	85.0	95.0	82.0	30	20.0		
1.000	.204	1.000	.259	.000	200.	609.	170	198	.053	.261	.386	.484	184.	1000	1.000	293	1.000	1.000	1.000	1.000	1.000	1.000	265.	1.000	000.	2000	250	.062	.279	.126	.119	6000	. 323	470	165	944.	.219	.008	1.000	204.	004.	34.5	020	.436	.419	105	.579	. 548	484	760.	. 554		
1.000	.211	1.000	.277	100.	010.	.610	270	0.000	.074	962.	605.	. 604	5000			306	1.000	1.000	1.000	1.000	1.000	1.000	.618	1.000	1.000	2000	335	1112	.285	.170	.149	6000	.383	100	500	. 550	.262	.008	1.000	995	***	6 200	115	.456	.528	111:	.693	699.	509.	440.	650		
.926	. 832	1.000	906	.574	.117	350	157	00001	119.	916.	926.	16.		505	000	89.	1.000	1.000	1.000	1.000	1.000	1.000	606.	0001	000.1	0000	956	616	. 832	.829	. 159	.570			916	146.	.845	. 562	000.1	796.	0.00	0 20	.773	. 912	006.	.712	216.	+16.	616.	04/	678	,	
999	418	199.	.264	590.	.172	6250	350	000	.186	619.	699.	.850	168.	110.	020	24.1	942.	000.	0000	941.	0000	000.	948.	0000	000.	000	160	. 552	.432	.394	106.	150.	909.	1,0	.686	242	.454	243.	000	26.	969.		305	.653	144.	. 222	099.	. 204	150.	617.	670		
0000.	. 595	1.000	.733	.215	.386	1,8.	044	660	.337	191.	565.	616.		160.	1000	707	1.000	1.000	1.000	1.000	1.000	121.	.914	0000	000.0	000.0	.857	.735	165.	916.	.465	971.	. 750	1,766	784	.845	919.	.170	. 650	. 663	*26.	170	265	.779	.735	.383	.923	.926	.920	210	110	:	
365	. 225	197.	394	244.	.610	162.	6010	0000	. 534	.870	.886	956.	956	1 6 7	921	454	.403	476	476	004.	.638	1.000	. 454	1.000	000.1	000.1	926	.855	511.	042.	149.	000	1000	. 866	.870	.915	.764	.351	1.000	956	104.	0 40	679	+18.	.820	.582	.959	1961	.958	170.	946		1
1.000	.024	1.000	1.000	.288	.368	.850	200	060	\$80.	.731	1.000	1691	269.	6.0.	0000	0000	1.000	1.000	1.000	1.000	1.000	1.000	106.	1.000	0000	2007	.822	.676	167.	195	.165	004.	014.	2010	909	.583	.285	.391	1.000	000-1	1600	600	141	664.	164.	.582	.728	.726	.653	170.	1002		
724.313	733.312	733.313	733.322	733.323	133.324	733.333	733.401	725.213	725.220	725.230	125.240	901.210	901.250	007.100	716. 230	714.312	714.313	714.314	114.322	114.323	114.324	135.220	735.240	735.312	735.313	115.51	735.317	735.518	753.210	153.223	753.230	153.405	903.210	903.230	721.210	751.220	751.230	151.405	723.220	163.314	123 542	723.402	964.210	904.220	904.230	604.406	902.210	962.220	902.230	240.210	766.220		

FIGURE 5-11. Individual Target Status at End of Game (Page 2 of 3).

こうきょしょくきょうならゆるからがりゅうものもまちょしままし	000 000 000 000 000 000 000 000 000 00
270 200 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000
	7.6
20000000000000000000000000000000000000	
0 7 7 7 7 7 7 0 0 7 7 0 7 0 7 0 0 0 7 0 0 0 7 0 0 0 7	226011212222222222222222222222222222222
2 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
1996 11 C 1996 1 C 19	2.0006 3.000 6.000
FULL O 3 0 4 7 FULL O 3 0 0 1 1 2 3 0 7 8 M 3 0 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.200 0.000 0
	0 1 4 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5
4 N 7 4 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	# - N C - O - O - O - O - O - O - O - O - O -
# 7 4 6 7 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	**************************************
750.25.0 750.25	722, 343 722, 344 722, 344 723, 344 723, 344 723, 344 724, 344 724

FIGURE 5-11. Individual Target Status at End of Game (Page 3 of 3).

SECTION 6

GLOSSARY

This section contains, in alphabetical order, all of the FORTRAN variable and array names that appear in COMMON of the AFSM program. When applicable, units for the variables are specified, and a brief definition is given.

Although most of the definitions are sufficient and selfexplanatory, a few of the arrays require additional detail over and above the definitions contained in the glossary. In most cases, the user is referred to the input section, Section 3 of this manual, for a more comprehensive definition of the array values. There are, however, six arrays whose values must be defined in detail before an undertaking of the machinations of the program can be achieved.

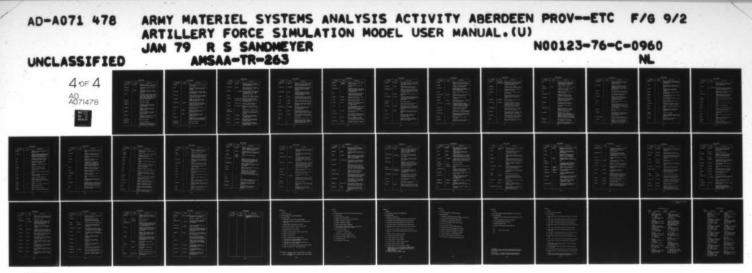
Their data descriptions are presented in the pages immediately following the general glossary. The arrays, in particular, are:

- 1. AMMO(10,10,14)
- 2. BRY(11,10)
- 3. DAMG(18,601)
- FUATT(33,12)
 STORE(9,14)
- 6. SYSORT(17,16)

Variable	Units	Definition
A(10,10)	kilometers	x-coordinates of endpoints of FEBA trace line segments
ACQLN		Computed but not used (= -2.0 ln 0.4)
ACQMIN	minutes	Minimum time for Red force to acquire a Blue battery as a counterbattery fire target
AJF		Not used in program
AJFHE		Not used in program
ALF1		Alphanumeric description of target acquisition method
ALF2, ALF3		Alphanumeric description of target
ANLCHS(15)		Total number of Red antiaircraft missile launchers attrited by Blue artillery fire
AMMO(10,10,14)	variable	14 information values for up to 10 batteries of a battalion and 10 round types (HE and ICM) avail- able to the battery
APC(15)		Total number of Red APCs attrited by Blue artillery fire
ARL(9,3)	meters ²	Lethal areas of the HE round being fired for nine target elements in three environments at current range
ARLETH	meters ²	Lethal area of standing personnel for current round type and range value
ARMFLG		Flag indicating current target is a Red artillery missile or rocket battery (=0.0, no such target; =1.0, MRL, =2.0, FROG)

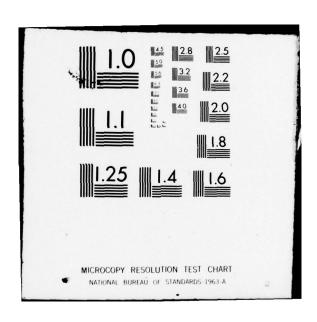
Variable	Units	Definition
ARMW(5,3)		Military worth of observed, unob- served, and plan missions defeated for each of four groups plus total military worth for each type mission
ARTFLG		Flag indicating current target is a Red tubed artillery battery (=0.0, no such target; =1.0, target)
ARTMW(15)		Military worth of Red targets attrited by Blue artillery fire
ATRKEY		Not used in program
AUF(5,33)		Total number of rounds fired by each of 33 Blue batteries up to last hour, last 3/4 hour, last 1/2 hour, last 1/4 hour, and current game time
AUR(10,33,5)		Total number of 10 round types fired by each of 33 Blue batteries up to last hour, last 3/4 hour, last 1/2 hour, last 1/4 hour, and current game time
AX(9,3,20)	variable	Kill probabilities against nine target elements in three environ-ments for each of up to twenty batteries
AXVOL(11)		Maximum number of volleys per mission per battery for 11 weapon systems
B(10,10)	kilometers	y-coordinates of end points of FEBA trace line segments

Variable	Units	Definition
BEGIN		Flag used to call CKDAMG (=0.0, call to update damage to a target; =1.0, call to check past damage to a potential target; =2.0 upon return from CKDAMG, target has been previously defeated)
BLD(25)		Basic load in round per battery for 25 round types
BLDFLV	<u></u>	Blue battery personnel defeat level. Blue battery must have at least this fraction of its original personnel alive in order to function
BNDX(9)	kilometers	x-coordinates of nine points on Scenario 3 boundary line
BNDY(9)	kilometers	y-coordinates of nine points on Scenario 3 boundary line
BNEC(14)		Tactical echelon identifications of Blue battalions
BNOD(4,14)		Battalion ordering for missions originating at Division or DS missions originating at Group, and missions originating at Division for D/A FDC, D/A FDC, GROUP FDC, and GROUP FDC, respectively
BNPR(14)		Battalion priority within the Blue force for each Blue battalion
BNRND(25,15)		Number of rounds of each type fired by each Blue battalion plus total number of rounds of each type fired through current game time
BNXID(15)		Alphanumeric battery/battalion description



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Variable	Units	Definition
BRY(11,10)	variable	Data with respect to each of up to 10 batteries within a battalion
BRYID(33)		Identification number of 33 Blue batteries
BUSY(3,33)	minutes	Completion times of up to three fire missions for each of 33 Blue batteries
CAS(9)		Fractional casualty level achieved by current fire mission for each of the nine target elements in the game (later changed to level for seven elements-personnel and six materiel target elements)
CASHE(9)		Not used in program
CASICM(9)		Not used in program
CBDAML(11)		Fraction of TOTATR value that is long-term damage for each of 11 weapon systems
CBDAMP(11)		Fraction of TOTATR value that is permanent damage for each of 11 weapon systems
CBDAMS(11)		Fraction of TOTATR value that is short-term damage for each of 11 weapon systems
CCOV(9,4)		Fractional coverage for nine target elements in four types of environment for current round
COVHE(9,4)		Not used in program
CHEKFG(33)		Not used in program
CHG(25,10)		Equivalent full charge values for 25 round types at 10 range values (CLGP, ICM, and HE round types)

Variable	Units	Definition
CLFLAG	 -	CLGP target flag (=0.0, no target; =1.0, target)
CLGP		CLGP round flag (=0.0, CLGP rounds allowed; =1.0, CLGP rounds not allowed)
CLGPSF(3)		Scale factors for computing number of tanks, APCs, and trucks killed by CLGP rounds
CLKILL(4)		Blank (first position) plus number of tanks, APCs, and trucks killed by current CLGP rounds
CLSCOR(4)		Number of missions fired, plus number of tanks, APCs, and trucks killed by CLGP rounds
COF122(3,4)	variable	Four coefficients for computing number of rounds required, based on distance to target for three battery target types
COLHDR(14)		Alphanumeric column headers for hard copy output
CPER	meters	Round-to-round error for current range value and round type expressed in CPE
CPET	meters	Total system error for current range value and round type expressed in CPE
CPK(9,4)		Probability of kill for nine target elements in four environments for current range value and round type
CPKHE (9,4)		Not used in program
CPKICM(9,4)		Not used in program

Variable	Units	Definition
CPR(25,10)	meters	Round-to-round error in CPE for 25 round types and 10 range values (HE and ICM rounds)
CPS(25,10)	meters	Total system errors in CPE for 25 round types and 10 range values (HE and ICM rounds)
CRE(9,4)	or meters	Radius of effects values for nine target elements in four types of environment for current range value and round type
CRITRA		Round criterion flag (=1.0, cost criterion; =2.0, weight criterion)
CRT(25)	(kilo-dollars) ⁻¹ or (metric tons) ⁻¹	Reciprocal of either cost per round in thousands of dollars or weight per round in metric tons for 25 round types
CST(25)	kilo-dollars	Cost per round in thousands of dollars for 25 round types
CSTI(25)	(kilo-dollars) ⁻¹	Reciprocal of cost per round in thousands of dollars for 25 round types
CXID(16)		Alphanumeric mix identification
DAMG(18,601)		Eighteen target parameter values for each of up to 601 targets in the game
DBFL(11)	kilometers	Mean distance traveled between long-term mobility failures for ll weapon systems
DBFP(11)	kilometers	Mean distance traveled between permanent mobility failures for 11 weapon systems
DBFS(11)	kilometers	Mean distance traveled between short-term mobility failures for ll weapon systems

Variable	Units	Definition
DBSY(49)	minutes	Cumulative time that each FDC and battery of the Blue force was busy up to current hourly printout
DDST(3,33)	kilometers	Distance traveled since last short- term, long-term, and permanent mobility failures for 33 Blue batteries
DEC(9,3,20)	meters	Expected coverage in deflection of nine target elements in three types of environment for as many as twenty batteries
DEPAP	meters	Deflection round-to-round probable error modified by factor, XK, for current range value and round type
DEPM	meters	Deflection MPI probable error for current range value and round type
DEPP	meters	Deflection round-to-round probable error for current range value and round type
DEPTH(10,33)	kilometers	Distance from FEBA of as many as 10 different emplacements for 33 Blue batteries
DEPTM	meters	Deflection MPI probable error including target location error for current range value and round type
DET(33)	minutes	Start of battery detection by Red force for each of 33 Blue batteries in the game
DETLN		Computed but not used (=1n 0.6)
DL		Defeat level (a Red unit is considered defeated if the fractional survivors of the critical element drops below this level)

		
Variable	Units	Definition
DROF(11)	rounds per minute	Dynamic rate of fire per tube for ll weapon systems
ECOF(10)		Effects cutoff values for 10 postures
EQAUF(2,33)		Equivalent number of full charge rounds up to last 15 minutes, and current game time for each of 33 Blue batteries
EQNR		Equivalent number of full-charge rounds fired by battery being processed on current mission
ERLHEV	minutes	Time of earliest HE type volley against current target
ERLICV	minutes	Time of earliest ICM type volley against current target
ETCT(11)	hours	Expected time to change tube when tube life is exceeded for ll weapon systems
EV(4)		Environment consideration flag for four environments (=0.0, do not consider; ≠0.0, gives fraction of target in that environment)
EW(2,5)	minutes	Start and stop times of five com- munications jams
FDCD(4,13)		Lateral backup, reinforcing, general support reinforcing, and fire plan assignments for 13 FDCs
FDCL(13)	minutes	Time for completion of current mission processing (at current site location) for each of 13 FDCs
FDCRM(13,2)	minutes or 	Time that FDC failure is repaired and type of failure for 13 FDCs

Variable	Units	Definition
FDOUT(13)	minutes	Time that FDC repairs are completed for 13 FDCs (if = 0.0, FDC has not experienced a failure)
FEBACT(11)	minutes	FEBA trace activation times for 10 FEBA traces and one dummy value
FEBRNG(25,30)		Number of rounds for 25 round types fired at 30 different ranges (1 km to 30 km in 1 km intervals for FEBA to target ranges)
FIFCLK	minutes	Cumulative 15-minute intervals of game time
FIRPL(43,50)	variable	Forty-three data values for each of up to 50 fire plans ("Header Cards") (see Table 3-9 for data value definitions)
FLGTOT(6)		Not used in program
FORSIZ		Total number of tubes available in Blue force at start of game.
FP(43,90)	variable	Forty-three data values for as many as 90 targets that are included in fire plans (See Table 3-10 for data values)
FPCLK	minutes	Rounds have been set aside for all fire plans occurring prior to this time.
FPRAT(11)		Ratio of volleys per battery to volleys per base system for 11 weapon systems
FPSCOR		Fire plan scoreboard (military worth total of fire plans executed thus far in the game)

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Variable	Units	Definition
FPTGIN		Number of fire plans entered as part of input data up to game time
FPTGSC		Number of fire plans scheduled through current game time
FPVOL(11)		Maximum number of volleys per battery against a fire plan target for 11 weapon systems
FSUM		Used to compute "Military Worth Hours"
FUATT(33,12)	variable	Miscellaneous data (12 values) for each of 33 Blue batteries
FUOD(33)		Priority values for 33 Blue batteries
GAMCLK	minutes	Current game time (time up through which FDCs may work)
GP(9,25,10)	or matrices	Pk (ICM) against nine target elements or radius of effects (HE) for 25 round types at 10 range values for a grassy environment
GROUP(2,4)		Upper and lower military worth values for four groupings
GRVM(45,10)		Round ID's for 45 round types and 10 postures in a grassy environment
GSRS(10,12)		Output results for as many as nine Blue battalions equipped with GSRS plus total results
HAVAIL		Hourly availability of tubes in Blue force
HBLD(25)		Half the basic load in rounds per battery for 25 round types

Variable	Units	Definition
HNMX(11)	rounds per tube per hour	Maximum number of rounds per tube per hour for 11 weapon systems for Blue force; number of tubes per launcher for Red force
IAMMO(45)		A pointer array; IAMMO(IR) is the index of round IR in the AUR array
IBNTYP(16)		Weapon system number in each Blue battalion in the game
IBRYID(16)		Integer value of battery identifi- cation number
ICM		Flag for ICM rounds (=0, none; >0, some); number of ICM round types to be considered for current mission
ICOUNT(30)	kilometers	Thirty range values used in game (1 km to 30 km)
IDDST(3,33)	kilometers	Initial (randomized) distance traveled by each of up to 33 Blue batteries at start of game since its last short-term, long-term, and permanent mobility failures
IDRDSV(6,33)		Round index numbers for six round types saved for fire plans by each of up to 33 Blue batteries
IFLAG(33)		Site number for attrition checks o 33 Blue batteries (= scheduled sit number plus number of minimoves)
IFLOAT(14)		Battalion float flag for battalion in the game (=0, no tubes floated; = 1, tubes floated into game)
IGSRS		Flag for GSRS mission (=0, no GSRS mission; =1, GSRS mission)

Variable	Units	Definition
IHE		Flag for HE rounds; number of HE round types to be considered by current battery on this fire mission (=0, none; >0, some)
IHOUR	hours	Integer value of game time in hours
IISYST(16)		Integer value of weapon systems identification number
IJF		Number of batteries massed on cur- rent fire mission
ILRNGC(11,10)		Number of rounds fired for 10 ranges in excess of 30 kilo- meters for 11 weapon systems
IMSNFD(33)		Number of fire missions completed from current site for each of 33 Blue batteries (used only if battery is a GSRS one)
IORDER(2)		Red weapon systems ordering for counterbattery fire missions
IQ		Subscript of current mission in QUE array
IRDCNT(25,30)		Number of rounds of 25 different round types available at 30 dif- ferent ranges (1 km to 30 km battery to target range)
IRDS(4,33)		Randomized initial number of equivalent full-charge rounds fired since last short-term, long-term, permanent firepower failures, and number fired since last tube change for each of up to 33 Blue batteries
IRMFLG(13)		FDC operable condition flag (=0, operable; =1, inoperable)
ISIT(33)		Current site location number for each of 33 Blue batteries

Variable	Units	Definition
ITRAY(33)		Index of FEBA trace last used for distance calculation for each of 33 Blue batteries
JFLAG(33)		Index of site locations at which battery most recently received counterbattery fire for 33 Blue batteries (index includes number of minimoves)
JGPTST		Position of first service element of target battalion in DAMG array
JPLTST		Position of first platoon of target battalion in DAMG array
JRAY(33)		Index of scheduled battery site used the last time that distance from FEBA to each of 33 Blue batteries was computed
KFLOAT		Number of artillery tubes floated into the game
KJX		Counter incremented in TIME but not used elsewhere (causes every third FDC transmission to require twice as much time if EW is in effect and FDC has TACFIRE)
KOUTRG		Number of targets out of range of all units
KSIG(20)		Use flag for each of 20 weapon systems entered from punched cards (=0, system not in game; =1, system in game)
KYUSKY(33,22)		Data for Red counterbattery fire missions against 33 Blue batteries
LHE(20)		LHE(I)=0, if i th firing battery is shooting ICM on this mission; LHE(I)=I, if i th firing battery is shooting HE on this mission

Variable	Units	Definition
MASSLT		Maximum number of Blue battalions allowed to mass fire on any single fire mission
MAXFP	• <u></u>	Maximum number of tape input and machine-generated missions per fir plan
MAXKYU		Maximum number of pending Red counterbattery fire missions allowed
MAXND		Maximum number of units allowed in the DAMG array
MAXPQ		Maximum number of missions allowed in the PREQ array
MAXQ		Maximum number of missions allowed in the QUE array
MAXTFP		Maximum number of tape input tar- gets per fire plan
MFDTYP(13)		Computer type available at each of 13 FDCs (=1, TACFIRE; =2, FADAC)
MGSRS		Number of batteries equipped with GSRS
MRKTLT		Maximum number of GSRS batteries allowed to mass on any single target
MSNFLG		Not used in program
MSNS(15)		Number of battery fire missions pe battalion plus total number of fir missions
MXBYPN		Maximum number of missions per battery per fire plan

Variable	Units	Definition
MXTTFP		Maximum number of additional missions per battery per fire plan (machine-generated)
MQT(2,3)	or kilometers	Order of and distance to target of three direct support battalions for fire mission from Division
NATI		Number of Artillery Target Intelli- gence reports completed
NBAT(2,16)		Number of batteries assigned and identification number of first battery assigned for each FDC
NBB		Number of times batteries were busy
NBLBAT		Number of Blue batteries in the game
NBLUSY		Number of Blue weapon systems in game
NBN		Number of Blue battalions
NCB		Number of times Group FDC was busy
NCO		Number of times Group FDC was out (down) when sent a mission
ND		Current number of Red units in DAMG array
NDB		Number of times Division FDC was busy
NDBF		Number of times target departed before being fired upon
NDCBSY		Number of FDCs busy
NDDB		Number of targets dropped because all battalions were busy

Variable	Units	Definition
NDFQ		Number of missions dropped due to QUE overload
NDFT(5,3)		Number of observed, unobserved, and planned missions defeated for four military worth groups, plus total number of each type defeated
NDO		Number of times Division FDC was out (down) when sent a mission
NDS		Number of Blue direct support battalions in the game
NE		Number of different type target elements
NESTP		Number of estimated postures
NEV		Number of target environments $(2 \le NEV \le 4)$
NFB ·		Number of times a battalion FDC was busy
NFBL		Number of missions fired after target unit departed
NFDC		Number of Blue FDCs (=NBN + 2)
NFO		Number of times a battalion FDC was out (down) when sent a mission
NFP		Number of fire plans
NFPTM		Number of fire plans on target list
NFT		Number of FEBA traces
NFU		Number of Blue fire units
NGRP		Number of military worth groupings

Variable	Units	Definition
NHOS	·	Number of housekeeping missions not done
NIFR(33)		Number of incoming fires received by each of 33 Blue batteries
NIP		Number of interpolation points for CLGP data
NITGTS		Number of individual potential targets in Red force
NJX		Counter that is incremented in TIME but not used elsewhere (causes every second FDC transmission to require double time when using FADAC during EW)
NKYU		Number of Red counterbattery fire missions currently scheduled
NMET		Number of MET message processing missions completed
NMINMV(33)		Number of minimoves for each of 33 Blue batteries
NMSN		Number of estimated postures in game
NOA		Number of times a battery was out of ammunition when considered for a mission
NOFM(5,3)		Number of observed, unobserved, and planned battalion fire missions for each of four military worth groups plus total missions of each type
NOR		Number of battalions out of range to current target

Variable	Units	Definition
NOTD		Number of observed targets that
NPLNIN		Number of fire plans on target tape
NPLNS		Maximum number of fire plans allowed in the game
NPOST		Number of target postures in the game
NPPD		Number of scheduled missions unable to do
NPR		Number of missions in PREQ array
NPS		Number of end points for FEBA trace line segments
NQ		Number of targets in QUE array
NQFM		Number of fire missions on QUE list
NR		Number of rounds per volley fired in current fire mission by current battery
NREDBT		Number of Red batteries in the game
NRFP		Maximum number of round types per battery per fire plan
NRG(15)		Number of round types for 15 pos- tures in a grassy environment
NRO(15)		Number of round types for 15 pos- tures in an open environment
NRS		Number of round types whose data are to be entered from punched cards
NRT (15)		Number of round types for 15 pos- tures in a town environment

Variable	Units	Definition
NRW(15)		Number of round types for 15 pos- tures in a wooded environment
NSAV		Number of targets saved
NSI(187)		Number of currently recorded intervals during which each of 187 batteries received incoming fire that could result in suppression
NSITE(33)		Number of different emplacements (10 maximum) for each of 33 Blue batteries
NSITEF(13)		Number of different emplacements (10 maximum) for each of 13 FDCs
NSUR		Number of survey processing missions completed
NSYS		Number of weapon systems types in Blue force
NSYSE		Number of weapon systems types in Red force
NTBN		Number of target battalions in Red force
NTCM		Number of targets combined in the game
NV		Number of volleys for current round type by current battery
NVL(20)		Number of volleys fired by each of up to 20 batteries massing on this mission
NVOL		Number of volleys fired by current battery on current mission
NZAP		Number of communications jams

Variable	Units	Definition
OBSCLK	minutes	Records of incoming fire at times prior to OBSCLK are now too old to have any suppressive effects
OLDCLK	minutes	A lower bound on the time at which any event now being considered can occur
OMEGA	degrees or radians	Angle of fall for HE rounds
OP(9,25,10)		Pk(ICM) or radius of effects (HE) against nine target elements for 25 round types at 10 range values for an open environment
ORVM(45,10)	·	Round ID numbers for 45 round types and 10 postures in an open environment
PER(15)		Number of Red personnel attrited by Blue artillery fire
PERSFG		Personnel flag for Red counter- battery fire (=1.0, batteries can be defeated due to personnel losses; #1.0, batteries cannot be defeated due to personnel losses
PI		π
PII		π-1
PLT(6)		Total number of platoons for each of six artillery damage levels
PNACQ(33)		Probability of non-acquisition by Red CB for each of 33 Blue batteries
PNDET(33)		Probability of non-detection by Red CB for each of 33 Blue batteries

Variable	Units	Definition
POST(18,18)		Unwarned and warned target elements posture data (see data card types 13 and 14)
PRCT(49)		Percentage of last hour that each FDC and battery of the Blue force was busy
PREQ(50,150)	variable	Fifty data values for each of up to 150 missions stored in the PREQ array (see Tables 3-3, 3-6, 3-7, 3-8, and 3-9 for typical data value descriptions)
QUE(43,56)	variable	Forty-three data values for each of up to 56 missions stored in the QUE array ordered by military worth (data value descriptions identical to those for PREQ array except last seven data points dropped)
RADARS(15)		Number of Red radars attrited by Blue artillery fire
RAM(33)		Fraction of tubes currently available at 33 Blue batteries
RAMIN(13,5)	or minutes	FDC equipment failure data for 13 FDCs
RASR		Square root of the ratio of round- to-round error to system error for current round type and range value
RASRHE		Not used in program
RBFL(11)		Mean number of rounds between long- term failures for each of 11 weapon systems
RBFP(11)		Mean number of rounds between permanent failures for each of 11 weapon systems

Variable	Units	Definition
RBFS(11)		Mean number of rounds between short-term failures for each of ll weapon systems
RDAM(25)	meters	Estimated radius of effects per battery volley for each of 25 round types
RDCLK	minutes	Used to determine value of TSTCLK which, in turn, determines whether next Red counterbattery fire mission is to be fired yet
RDCST(15)	kilo-dollars	Total cost of rounds expended by each battalion and total cost of all rounds expended by the Blue force
RDS(4,33)		Randomized initial values for number of rounds fired since last short-term, long-term, permanent fire power failure and tube change for each of up to 33 Blue batteries
RDSUM(15)		Number of rounds fired by each battalion and total number of rounds fired by Blue force
RDSV(6,33,30)		Number of volleys saved for each of six round types available at each of 33 Blue batteries for use against each of 30 fire plan missions
RDSVK(6,33)		Total number of fire plan targets for which each of six round types available has been saved at each of 33 Blue batteries
RDWGT(15)	metric tons	Total weight of rounds fired by each battalion and total weight of all rounds fired by Blue force
RE(25,10)	meters	Radius of effects for HE and Pk for ICM rounds for each of 25 round types at each of 10 range values

		T
Variable	Units	Definition
REC(9,3,20)	meters	Expected coverage in range against each of nine target elements in each of three environments for each of 20 batteries massing on this fire mission
REDBAT(145,8)	or minutes	Red battery data (eight values) for as many as 145 Red batteries in the game
REDBN(60,7)		Red battalion data (seven values) for as many as 60 Red battalions in the game
REDECH(8,3)		Number of first Red battalion equipped with weapon system, total number of battalions with system, and round ID number for each of eight Red weapon systems
REDFLG		Not used in program
REDMOV(145,6,4)	minutes or kilometers	Arrival and departure times and site coordinates for each of six emplacements for each of 145 Red batteries
REDSCD(145,6)	variable	Data (six values) on each of 145 Red batteries that can contribute at least 5.0 percent to current counterbattery fire mission
REL(25)		In-flight reliability of each of 25 round types
RELI(25)		Reciprocal of in-flight reliability of each of 25 round types
REPAP	meters	Range round-to-round probable error modified by factor, XK, for current round type and range value (in CPE)

Variable	Units	Definition
REPM	meters	MPI probable error in range for current round type and range value (in CPE)
REPP	meters	Range round-to-round error for current round type and range value (in CPE)
REPTM	meters	Range MPI probable error including target location error for current round type and range value (in CPE)
RG(25,10)	kilometers	Range values for range versus error and EFC tables for each of 25 round types at each of 10 range values
RIFMIN		Not used in program
RIFTIM(33)	minutes	Not used in program
RMX(25)	kilometers	Maximum range for each of 25 round types
RNDCNT(25,30)		Number of rounds of each round type for each of 30 range values (battery to target ranges)
RNDID(25)		Round caliber ID number for each of 25 round types
RNGC(11,10)		Number of rounds fired by each of 11 weapon systems for each of 10 ranges in excess of 30 kilometers
RNGMAX(11)	kilometers	Maximum range for each of 11 weapon systems
ROWHDR(20)	variable	Alphanumeric identifiers for 20 rows per page of hard copy output
RR		In-flight reliability of current round type

Variable	Units	Definition
RSPY(25)	rounds per hour	Resupply rate per battery for each of 25 round types
RTP(25)		Round identification for each of 25 round types (=1.0, ICM; =2.0, HE; =3.0, CLGP)
SAVAIL		Used to calculate average fraction of Blue tubes available over entire game
SAVRD(9,33)		Number of volleys saved for fire plan targets for each of nine round types at each of 33 Blue batteries
SBLD(11)		Number of rounds in basic load per battery for each of 11 weapon systems
SCED(2,33,30)	minutes	Start and end times for each of up to 30 fire plan missions for each of up to 33 Blue batteries
SCEDT(33)		Total number of fire plan missions assigned to each of up to 33 Blue batteries
SCENAR		Key to scenario being used
SDET(33)	minutes	Time since current detection/ acquisition process by Red force was initiated for each of 33 Blue batteries
SMFP(50,9)	variable	Fire plan results for each of up to 50 fire plans
SPL	meters	Submunition pattern radius (or length) for current ICM round at current range
SPRESS(187,4,15)	variable	Four data values for 15 suppression intervals for each of 187 batteries (Red and Blue)

Variable	Units	Definition
SPRET	minutes	Suppression time duration following cessation of incoming fire
SPRFLG		Suppression flag for current battery (=1.0, suppressed; =0.0, not suppressed)
SPRKEY		Suppression subroutines control flag (=1.0, use subroutines; =0.0, do not use subroutines)
SPW	meters	Submunition pattern width for current ICM round at current range
SQRTPI		π1/2
SRDIX(16)		Alphanumeric weapon system title or alphanumeric round name and weapon system identification
SROF(11)	rounds per minute	Static rate of fire per tube for each of 11 weapon systems
SRSPY(11)	rounds per hour	Battery resupply rate for each of 11 weapon systems
STORE(9,14)	variable	Data used by higher echelons in selecting battalions to fire a mission
STORMW(40)		Cumulative military worth value for each cumulative hour of game time up to a maximum of 40 hours
STYP(11)		Weapon system type for each of ll systems (=1.0, cannon; =2.0, missile; =3.0, GSRS)
SVMW(6,33,30)		Military worth of target for six round types, 33 batteries, and 30 fire plans

iable utes	Red battalion breakdown, including fraction not killed by non-artillery at current time and original amount Individual Red target breakdown including fraction not killed by non-artillery at current time and original amount Identification numbers of 11 weapon systems Data breakdown for each weapon system in the game Number of Blue tubes in current mix for each of up to 11 weapon systems
	including fraction not killed by non-artillery at current time and original amount Identification numbers of 11 weapon systems Data breakdown for each weapon system in the game Number of Blue tubes in current mix
	systems Data breakdown for each weapon system in the game Number of Blue tubes in current mix
	system in the game Number of Blue tubes in current mix
 utes	
utes	
	Time of arrival at each of 10 emplacements for each of 33 Blue batteries
utes	Time of arrival at each of 10 emplacements for each of 13 FDCs
iable	Temporary storage of data for non- fire plan missions, MET missions, survey missions, ATI missions, and fire plan header information
utes	Time between fire plan missions for each of 11 weapon systems
utes	Time between missions for each of 11 weapon systems
	Cumulative time that each FDC and battery in the Blue force were busy, up to current game time
	utes

Variable	Units	Definition
TD(10,33)	minutes	Time of departure from each of 10 emplacements by each of 33 Blue batteries
TDF(10,13)	minutes	Time of departure from each of 10 emplacements by each of 13 FDCs
TFADVL	minutes	Time required for a battery to fire the additional volleys when firing more than one volley on current mission
TFCLM	minutes	Minimum time required to fire a CLGP mission
TFK(15)	minutes	Time available for firing a CLGP mission at each of 15 interpolation points
TFP(43,75)	variable	Data values for each of 75 fire plan targets (See Table 3-10)
TGSV(6,33,30)		Target ID numbers for each of six round types available at each of 33 Blue batteries for each of 30 fire plan targets
THOUR	hours	Time at current hourly printout
TIFR(33)	minutes	Time that most recent incoming counterbattery fire was received by each of 33 Blue batteries
TIM(21,4,4)	minutes	Time data for various combinations and states of readiness of FDC computer transmission/processing
TIMNOW	minutes	Time current battery finishes firing its rounds
TIMSKY(33)	minutes	Time at which each of 33 counter- battery fire missions are scheduled; TIMSKY(1) is time of next counterbattery fire mission

Variable	Units	Definition
TIMVL(20)	minutes	Time of first volley for each of up to 20 batteries massing on this mission
TL	meters	Current target length
TLAX(49)	minutes	Cumulative time that each FDC and battery in the Blue force were idle up to current game time
TLE	meters	Current target location error
TLSTVL	minutes	Time of last volley of all volleys fired by the (up to 20) batteries massing on this mission
TMET(16)	minutes	Time of receipt of MET message at specified FDC
TMETZO	minutes	Time that original MET data were taken
TMT	minutes	Red battery memory time duration for counterbattery fire purposes
TMWHRS	MW-hours	Total military worth hours at current game time
TMX	minutes	Game termination time
TMXFP(3,15)	or minutes	ID numbers and fire plan processing start times for each of 15 fire plans
TNK(15)		Number of Red tanks attrited by Blue artillery fire
TOT105(20)	variable	Output data for all systems of some common caliber
TOTATR(11)		Total attrition caused by a standard level of Red counter-battery fire against each of up to ll weapon systems

Variable	Units	Definition
TOTS(6)		Total number of targets damaged for each of six artillery damage levels
тоттм	minutes	Not used in program
TP(9,25,10)	or meters	Pk(ICM) or radius of effects (HE) against nine target elements for 25 round types at 10 range values for a town environment
TPFU(11)		Number of tubes or launchers per fire unit for each of 11 weapon systems
TRAM(49)	minutes	Cumulative time that each FDC and battery of the Blue force were down due to RAM, up to current game time
TRFAL(11)	hours	Time to repair a long-term failure due to enemy attrition for each of 11 weapon systems
TRFAS(11)	hours	Time to repair a short-term failure due to enemy attrition for each of ll weapon systems
TRFFL(11)	hours	Time to repair a long-term failure due to firing for each of ll weapon systems
TRFFS(11)	hours .	Time to repair a short-term failure failure due to firing for each of ll weapon systems
TRFML(11)	hours	Time to repair a long-term failure due to moving for each of 11 weapon systems
TRFMS(11)	hours	Time to repair a short-term failure due to moving for each of 11 weapon systems

Variable	Units	Definition
TRK(15)		Number of Red trucks attrited by Blue artillery fire
TRVM(45,10)		Round ID numbers for each of 45 round types and each of 10 postures in a town environment
TSTART	hours	Time of first print of game results
TSTCLK	minutes	Time up to which scheduled Red counterbattery missions will be executed
TTFP(43,15)	variable	Fire plan data for up to 15 fire plans when more than one battalion is required for fire plan execution
TTGF(2)	minutes	Time required to get float based on battalion echelon identification number
TT0TC(33)		Number of tubes out for tube changes for each of 33 Blue batteries
TTPOA(33)		Number of tubes out due to attrition for each of 33 Blue batteries
TTPOR(33)		Number of tubes out due to reliability for each of 33 Blue batteries
TUBAV(33)		Current number of tubes available at each of 33 Blue batteries
TUBIN(8,33)	minutes	Times when tubes will be returned to each of 33 Blue batteries
TUBLIF(11)		Tube life in number of rounds fired for each of 11 weapon systems

AFSM GLOSSARY

Variable	Units	Definition	
TUBOT(33)		Number of tubes out at each of 33 Blue batteries at current game time	
TW	meters	Current target width	
TZRO	minutes	Game start time	
USEDFP(45,33)		Number of times that saved rounds (for fire plan) were used for each of 45 round types saved by each of 33 Blue batteries	
VK1(15)		Number of tanks destroyed within time-available interval for each of 15 interpolation points (CLGP rounds only)	
VK2(15)		Number of APCs destroyed within time-available interval for each of 15 interpolation points (CLGP rounds only)	
VK3(15)		Number of trucks destroyed within time-available interval for each of 15 interpolation points (CLGP rounds only)	
VL	meters	Total length of volley being processed	
VOL(10)		Desired attack level for each of 10 postures	
VW	meters	Total width of volley being processed	
W		Constant = 0.693147 = 1n 2.0	
w1		Computed but not used (=2.0 ln 2.0)	
WGT(25)	metric tons	Crated unit weight for each of 25 round types	

AFSM GLOSSARY

Variable	Units	Definition		
WGTI (25)	(metric tons)-1	Reciprocal of crated unit weight for each of 25 round types		
WKS		Constant = $0.892437 = (-\pi \ ln \ 0.7)^{-1}$		
WORK(4,16,4)	or minutes	Four priorities for each FDC and four data values for each non-fire mission		
WP(9,25,10)	or meters	Similar to OP(9,25,10) but for a wooded environment		
WRVM(45,10)		Round identification numbers for each of 45 round types used against each of 10 postures in a wooded environment		
XBSY(49)	minutes	Time that each FDC and battery of the Blue force was busy during last hour of game time		
XK		Factor for modifying deflection and range precision errors for current round type and range value		
XNRF(15)		Number of CLGPs fired (based on 2 tubes) within time available interval for each of 15 interpolation points		
XS(10,33)	kilometers	x-coordinates for each of 10 emplacement sites for each of 33 Blue batteries		
XSF(10,13)	kilometers	x-coordinates for each of 10 emplacement sites for each of 13 FDCs		
YS(10,33)	kilometers	y-coordinates for each of 10 emplacement sites for each of 33 Blue batteries		

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Variable	Units	Definition	
YSF(10,13)	kilometers	y-coordinates for each of 10 emplacement sites for each of 13 FDCs	
	1000 FEED 0		

AMMO(I,J,K)

(10, 10, 14)

*I is the ith round type

J is the jth battery of the specified battalion

K is as defined below:

- =1, round number as entered from Subroutine ROUND
- =2, lethal area weighted over posture and environment for ICM rounds only
- =3, weighted lethal area divided by criterion
- =4, precision error (CPER) for round-to-round, meters
- =5, total system error (CPET), meters
- =6, expected fractional coverage (ECV)
- =7, number of rounds required for specified damage level
- =8, number of rounds available
- =9, number of rounds fired
- =10, effect achieved by number of rounds fired
- =11, lethal area for HE rounds weighted over posture and environment for "unwarned" postures
- =12, lethal area for HE rounds weighted over posture and environment for "warned" postures
- =13, total CPE for calculating estimated effects (ECPET), meters
- =14, number of equivalent full charge rounds (EQNR)

^{*}I= 1 through 5, ICM rounds ranked by greatest lethal area divided by criterion

I= 6 through 10, HE rounds ranked by greatest lethal area divided by criterion

BRY(I,J)

(11,10)

J is the battery number (fire unit) within the specified battalion I is as defined below:

- =1, battery identification number
- =2, number of tubes available to fire in the battery
- =3, battery x-coordinate, kilometers
- =4, battery y-coordinate, kilometers
- =5, range to target squared, kilometers²
- =6, priority value of jth battery relative to other batteries in the battalion; smaller value is better
- =7, key to fire unit status
 - =1, available; =2, single busy;
 - =3, double busy; =4, not available
- =8, rate of fire, rounds per tube per minute
- =9, ith subscript of round in AMMO(I,J,K) array
- =10, battery number (KFU)
- =11, system number of this battery

DAMG(I,J)

(18,601)

J is the jth specific target ID in the DAMG array

I is as defined below:

- =1, target ID from QUE(1, IQ)
- =2, fractional value of personnel survivors due to artillery fire
- =3, fractional value of tank survivors due to artillery fire
- =4, fractional value of APC survivors due to artillery fire
- =5, fractional value of truck survivors due to artillery fire
- =6, fractional value of artillery tube survivors due to artillery fire
- =7, fractional value of radar survivors due to artillery fire
- =8, fractional value of missile launcher survivors due to artillery fire
- =9, original number of personnel in target
- =10, original number of tanks in target
- =11, original number of APCs in target
- =12, original number of trucks in target
- =13, original number of artillery tubes in target
- =14, original number of radars in target
- =15, original number of missile launchers in target
- =16, changed from "0." to "2." when cumulative damage from nonartillery and artillery fire results in critical target element damage greater than specified defeat level, i.e. a defeated target
- =17, number of platoons in target
- =18, ID number for type of critical element

FUATT(I,J)

(33, 12)

I is the ith Blue battery to which data applies

J is as defined below:

- =1, probability that battery has been detected at current site
- =2, time since detection process began, minutes
- =3, probability of acquisition at current site
- =4, time since acquisition process began, minutes
- =5, not used at this time
- =6, fractional value of Blue personnel survivors
- =7, cumulative short-term tube damage now in battery
- =8, cumulative long-term tube damage now in battery
- =9, cumulative permanent tube damage now in battery
- =10, corrects battery site (rocket systems only)
- =11, number of incoming fires received since last move
- =12, total number of incoming fires received thus far

STORE(I,J)

(9,14)

 ${\tt J}$ is the ${\tt j}^{\mbox{\it th}}$ Blue battalion being considered for current mission

I is as defined below:

- =1, the time that this battalion would receive message to fire, minutes
- =2, fractional damage this battalion can achieve
- =3, FDC that would process this mission
- =4, *posture sequencing flag
- =5, **General Support Rocket System (GSRS) flag

=6
=7
=8
=9

^{*}If STORE(4,J) \geq 1000., use posture sequencing when an HE round is the first one fired; otherwise do not use posture sequencing on this mission

^{**}If STORE(5,J) \geq 5., consider only GSRS batteries against this target; otherwise, consider only cannon or missile batteries

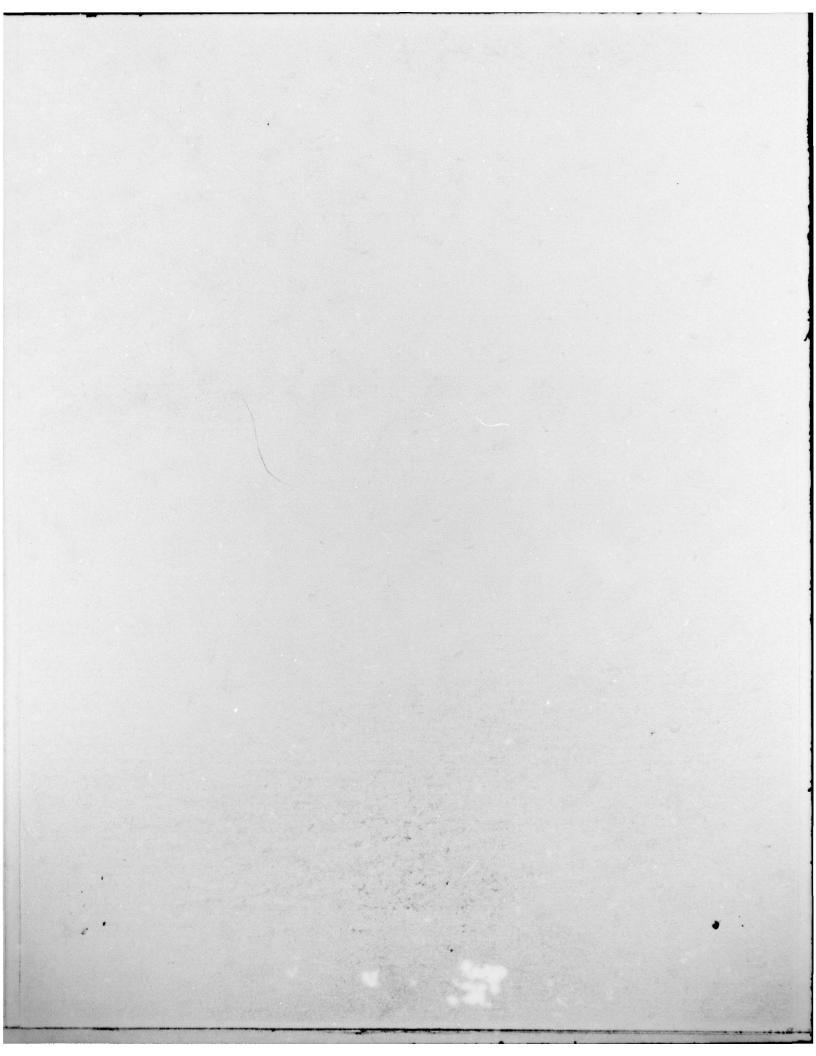
SYSORT(I,J)

(17, 16)

J is the jth Blue weapon system type

I is as defined below:

- =1, total military worth of Red targets attrited by jth Blue system type
- =2, total number of Red personnel attrited by jth Blue system type
- =3, total number of Red armor attrited by jth Blue system type
- =4, total number of Red trucks attrited by jth Blue system type
- =5, total number of Red artillery tubes attrited by jth Blue system type
- =6, total number of Red radars attrited by jth Blue system type
- =7, total number of Red missile launchers attrited by jth Blue system type
- =8, total number of battery missions fired by jth Blue system type
- =9, total number of rounds fired by jth Blue system type
- =10, total weight of rounds fired by jth Blue system type, metric tons
- =11, total cost of rounds fired by jth Blue system type, kilo-dollars
- =12, total number of incoming fires received by jth Blue system type
- =13, total number of Blue artillery tubes of jth Blue system type out due to attrition
- =14, total number of Blue artillery tubes of j^{th} Blue system type out due to RAM
- =15, total number of Blue artillery tubes up of jth Blue system type
- =16, average fractional value of tubes available of jth Blue system type
- =17, working slot for number of Blue artillery tubes up of jth Blue system type [used for computation of SYSORT(16,I)]



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